

111 Herrick Street, Merrimack, NH 03054 TEL: (603) 424-2022 · FAX: (603) 429-8496

January 03, 2001

Tim Dame GEI Consultants, Inc. 1021 Main Street Winchester, MA 01890

TEL: (781) 721-4000 FAX (781) 721-4073

RE: Canton (MDC) 00291

Order No.: 0012061

Dear Tim Dame:

presented in the following report. AMRO Environmental Laboratories Corp. received 7 samples on 12/6/00 for the analyses

associated with this project. Case Narrative for quality control deviations that were encountered during the analyses Receipt Checklist details the condition of your sample(s) upon receipt. Please see the enclosed requirements. A copy of the appropriate State Certificate is attached. The enclosed Sample AMRO operates a Quality Assurance Program which meets or exceeds EPA and state

period, please contact us immediately. the remaining sample(s). If you require further analysis, or need the samples held for a longer period of thirty (30) days from this report date. After this time, AMRO will properly dispose of Please be advised that any unused sample volume and sample extracts will be stored for a

project in the future, please refer to the Order Number above This letter is an integral part of your data report. If you have any questions regarding this

Sincerely,

Nancy Stewart
Vice President / Lab Director

WORK ORDER SAMPLE SUMMARY

Date: 21-Dec-00

Work Order Sample Summary

CLIENT: GEI Consultants, Inc.

Project: Canton (MDC) 00291 0012061

Lab Order:

Date Received: 12/6/00

12/4/00	Debris	0012061-07A
12/5/00	Trip Blank	0012061-06A
12/5/00	W-11	0012061-05E
12/5/00	W-11	0012061-05D
12/5/00	W-11	0012061-05C
12/5/00	W-11	0012061-05B
12/5/00	W-11	0012061-05A
12/5/00	W-10	0012061-04E
12/5/00	W-10	0012061-04D
12/5/00	W-10	0012061-04C
12/5/00	W-10	0012061-04B
12/5/00	W-10	0012061-04A
12/5/00	W-6	0012061-03E
12/5/00	W-6	0012061-03D
12/5/00	W-6	0012061-03C
12/5/00	W-6	0012061-03B
12/5/00	W-6	0012061-03A
12/5/00	W-5	0012061-02E
12/5/00	W-5	0012061-02D
12/5/00	W-5	0012061-02C
12/5/00	W-5	0012061-02B
12/5/00	W-5	0012061-02A
12/5/00	W-1	0012061-01E
12/5/00	W-1	0012061-01D
12/5/00	W-1	0012061-01C
12/5/00	W-1	0012061-01B
12/5/00	W-1	0012061-01A
Collection Date	Client Sample ID	Lab Sample ID

Lab Order:

0012061

Client:

GEI Consultants, Inc.

Project:

Canton (MDC) 00291

### **DATES REPORT**

ple ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
061-01A	W-1	12/5/00	Aqueous	VOLATILES by GC/MS		12/15/00	12/15/00
061-01B				Volatile Petroleum Hydrocarbons		12/11/00	12/12/00
061-01C				EPH, Water, Full List		12/12/00	12/13/00
061-01D				PCBS IN WATER		12/11/00	12/12/00
061-01E				ARSENIC, Dissolved		12/12/00	12/14/00
				ICP METALS, DISSOLVED		12/12/00	12/13/00
				LEAD, Dissolved		12/12/00	12/15/00
				MERCURY, Dissolved		12/13/00	12/13/00
				SELENIUM, Dissolved		12/12/00	12/14/00
061-02A	W-5			VOLATILES by GC/MS		12/15/00	12/15/00
061-02B				Volatile Petroleum Hydrocarbons		12/11/00	12/12/00
061-02C				EPH, Water, Full List		12/12/00	12/13/00
061-02D				PCBS IN WATER		12/11/00	12/12/00
061-02E				ARSENIC, Dissolved		12/12/00	12/14/00
				ICP METALS, DISSOLVED		12/12/00	12/13/00
				LEAD, Dissolved		12/12/00	12/15/00
				MERCURY, Dissolved		12/13/00	12/13/00
				SELENIUM, Dissolved		12/12/00	12/14/00
061-03A	W-6			VOLATILES by GC/MS		12/15/00	12/15/00
061-03B				Volatile Petroleum Hydrocarbons		12/11/00	12/12/00
061-03C				EPH, Water, Full List		12/12/00	12/13/00
061-03D				PCBS IN WATER		12/11/00	12/12/00
061-03E				ARSENIC, Dissolved		12/12/00	12/14/00
				ICP METALS, DISSOLVED		12/12/00	12/13/00
				LEAD, Dissolved		12/12/00	12/19/00
				MERCURY, Dissolved		12/13/00	12/13/00
				SELENIUM, Dissolved		12/12/00	12/14/00
061-04A	W-10			VOLATILES by GC/MS		12/15/00	12/15/00

Lab Order:

0012061

Client:

GEI Consultants, Inc.

Project:

Canton (MDC) 00291

### **DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
0012061-04B	W-10	12/5/00	Aqueous	Volatile Petroleum Hydrocarbons		12/11/00	12/12/00
0012061-04C				EPH, Water, Full List		12/12/00	12/13/00
0012061-04D				PCBS IN WATER		12/11/00	12/12/00
0012061-04E				ARSENIC, Dissolved		12/12/00	12/14/00
				ICP METALS, DISSOLVED		12/12/00	12/13/00
				LEAD, Dissolved		12/12/00	12/15/00
				MERCURY, Dissolved		12/13/00	12/13/00
				SELENIUM, Dissolved		12/12/00	12/14/00
0012061-05A	W-11			VOLATILES by GC/MS		12/16/00	12/16/00
0012061-05B				Volatile Petroleum Hydrocarbons		12/11/00	12/12/00
0012061-05C				EPH, Water, Full List		12/12/00	12/13/00
0012061-05D				PCBS IN WATER		12/11/00	12/12/00
0012061-05E				ARSENIC, Dissolved		12/12/00	12/14/00
				ICP METALS, DISSOLVED		12/12/00	12/13/00
				LEAD, Dissolved		12/12/00	12/15/00
				MERCURY, Dissolved		12/13/00	12/13/00
				SELENIUM, Dissolved		12/12/00	12/14/00
0012061-06A	Trip Blank			VOLATILES by GC/MS		12/16/00	12/16/00
0012061-07A	Debris	12/4/00	Soil	PCBS IN SOIL/SOLIDS		12/11/00	12/13/00
				Percent Moisture			12/12/00

CHAIN-OF-CUSTODY

00/206  $\overline{\Phi}$  GEI Consultants, Inc. AMRO DOCUMENT NUMBER Chain-of-Custody Record 1 of Winchester, Massachusetts Project Name and Number: Preservative Canton (MDC) 00291 4C/ \*c/ 4403 Samplers: A. Stone P. Silva **Analysis** Station No. Date Time Matrix Sample Number No. of Remarks (houts) Containers 12/5 1445 Water 00291-WI X X W-5 12 5 1045 water 00291-WS 9  $\times$  $\times$  $\times$ W-6 12/5 1235 water 00291-W6 X 9 X 12/5 W-10 1615 Water 9 00291-W10 X X X 12/5 W=11 1600 water 00291-WIL 9 X X X  $\times$ 12/5 Trip Blank water 12/4 10:15 00291 - debris debris Call Tim Dame For how to prep. For analysis. TAT: 24 lv 48 hr \_\_\_\_ 72 hr  $\mathcal{L}$ Normal Relinquished by: Date/Time: Received by: Relinquished by:

A . Sowe A. Stone Date/Time: Sample Fridge 12/5 / 1742 11/6/01/1/3/) Date/Time: Relinquished by: Date/Time: Received by: Received for Laboratory by:

Constance Cearler

Method of Shipment: Lab courier

Remarks:

SAMPLE RECEIPT CHECKLIST

AMRO Environmental Laboratories Corporation

## SAMPLE RECEIPT CHECKLIST

111 Herrick Street Merrimack, NH 03054

18/00	Date: /2/8		2 6	Checked By:		Laceled By: ST
18,	Date: /2/		,	Logged in By: 5%	Date: 12/6	Received By: Cb D
	X				l op?	Eiltration Logs
	<u>۲</u>			: •	<b>g</b> ?	Client Log?
	1		x		ht Log?	Dry Weight Log?
	¥		7		Internal Tracking Log?	Internal T
					ed into:	21 Information entered into:
						TAT:
						Analysis:
					i i	Opto:
					What samples sein.	Where sent
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				mples:	20. Subcontracted Samples:
	Γ -	7077	YUA IAD AGAT	If NO then fax client and inform the		
		2000		-	liquot provided?	Was dry weight aliquot provided?
		client	ec from	If NO then weights MUST be obtained from client		
						Were vials provided by AMRO?
				If NO then client must be faxed.	If NO then	
				line on the viai?	Tions presentation level come close to the fill line on the viai?	Tops presentation
				If NO then client must be faxed.	) cover the soil?	Coes preservative cover the soil?
	-					FM or SB:
				ייטו, טטייטטמיטייי עיסטיייניי	Sampling Method VOA (circle offe): Methediation Co-codium circumstrated	Sampling Method V
	uik X	E=EnCore, B=Buik		not, E≡EnCore (all-lighte rot ≤S≕Sodium Bisulfate	Sampling Method VPH (circle one): M=Methanol, E=EnCore (all-ugin coincincinc) Committee Method VOA (circle one): M=Methanol, SS=Sodium Bisulfate, E=EnCo	Sampling Method \
			corsiner		ils only:	19. VPH and VOA Soils only:
	<b>,</b>		\ 		received?	iŧ
	-		·   }	sted analysis?	Were the sample volumes sufficient for requested analysis?	17. Were the sample v
			1		c. with no air bubbles?	16. Were VOA vials rec, with no air bubbles?
			7	n or leaking)	. Were all samples received intact? (none broken or leaking)	15. Were all samples re
			7		le containers used?	14. Were proper sample containers used?
			7		properly preserved?	13. Were all samples properly preserved?
			X		properly labeled?	12. Were all samples properly labeled?
			X	•	within holding time?	11. Were samples rec. within holding time?
	_		7	_	10. Does the info on the COC match the samples?	10. Does the info on th
			7	•	is the CCC filled out correctly and completely?	<ol><li>is the CCC filled out</li></ol>
				Obtained by:	n from: Date:	Client authorization from:
				the analyses.	If no obtain authorization from the client for the analyses.	If no obtain author
	-		7	<b></b>	e 4°C ± 2°C?	Is client temperature 4°C±2°C?
		4		e sampled?	Were samples received the same tay they were sampled?	8. Were samples recei
			_	_neither	Samples rec. with ice k ice packs	Samples re
	-			TEMP #		Laporatory receipt temperature.
			¥	·	ent?	<ol><li>Is CCC signed and dated by client?</li></ol>
			λ  -	- <b>-</b>	h sambles?	<ol> <li>Is COC included with samples?</li> </ol>
	Y			<b></b>	older if received?	Air Bill included in folder if received?
	7			.,		Custody Seals Intact?
		γ			ent?	L Dustody Seals present?
	Υ			)	Army Samples received in individual plastic bags?	, Army Samples recei
Comments	AIV.	.Yo	Yes !	· J [	pon Receipt	tems to be Checked Upon Receipt
					ner Ober	fand Call Other Courier
	l.		. (		ed Ex., OPS Zaviko coun	Ship via: (circle one) in
	2/10/0		Date Nec		on (MDC) coa9/	Project Name: Contan (NDC
	1906		AMRO IU			1361 (DE)
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Please Circle if: Sample= Soil Sample= Waste

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						Ţ	25.40	ASP PSI	01-05A
Acded	1	of Preserv	AMRO		무	Listed	Sample	Anaiysis	Sample ID
Voiume Preservative	ח		Preserv. Added by	Acceptable?	Initial	Preserv.	Volume		
	- 1		ē						Sample= Waste

pH Checked By: 5

Date: 28 pH adjusted By:

Date:

STATE CERTIFICATE

## A he commonwealth of Massachusetts



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### Department of Senator William X. Wall Experiment Station Division of Environmental Analysis Environmental Protection

certifies

M-NH012

AMRO ENVIRONMENTAL LAB 111 HERRICK ST MERRIMACK, NH 03054-0000

Laboratory Director: Nancy Stewart

for the analysis of NON POTABLE WATER (CHEMISTRY)
POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

Massachusetts regulations at 310 CMR 42.00. The laboratory is regulated by and shall be responsible for being in compliance with This certificate supersedes all previous Massachusetts certificates issued to this laboratory.

verify the current certification status of the laboratory: as issued by the Massachusetts D.E.P. This certificate is valid only when accompanied by the latest dated Certified Parameter List Contact the Division of Environmental Analysis to

1

unannounced laboratory inspections Certification is no guarantee of the validity of the data. This certification is subject to

Issued: 01 JUL 2000

Expires: 30 JUN 2001

Director, Division of Environmental Analysis

M

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## COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 20 DEC 2000

M-NH012 AMRO ENVIRONMENTAL LAB

MERRIMACK NH

NON POTABLE WATER (CHEMISTRY) Effective 20 DEC 2000 Date Expiration 30 JUN 2001

Method

ALDRIN

Analyte

**ALUMINUM** 

AMMONIA-N

ARSENIC ANTIMONY

BERYLLIUM

BIOCHEMICAL OXYGEN DEMAND

CADMIUM

CALCIUM

CHEMICAL OXYGEN DEMAND

CHLORDANE

CHLORIDE

COBALT CHROMIUM

COPPER

DIELDRIN

DDT DDD

FLUORIDE

HEPTACHLOR

HEPTACHLOR EPOXIDE

RON

KJELDAHL-N

LEAD

MAGNESIUM

MANGANESE

MERCURY

MOLYBDENUM

NICKEL

NITRATE-N

NON-FILTERABLE RESIDUE

OIL AND GREASE

ORTHOPHOSPHATE

POLYCHLORINATED BIPHENYLS (OIL)

POLYCHLORINATED BIPHENYLS (WATER)

POTASSIUM

SELENIUM

SODIUM SILVER

SPECIFIC CONDUCTIVITY

STRONTIUM

2

### DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMONWEALTH OF MASSACHUSETTS

Certified Parameter List as of: 20 DEC 2000

M-NH012 AMRO ENVIRONMENTAL LAB

MERRIMACK NH

NON POTABLE WATER (CHEMISTRY) Date Effective 20 DEC 2000 Date Expiration 30 JUN 2001

Method

THALLIUM SULFATE Analyte

TOTAL ALKALINITY

TOTAL CYANIDE

TOTAL DISSOLVED SOLIDS

TOTAL HARDNESS (CACO3)

TOTAL PHENOLICS

TOTAL PHOSPHORUS

TOTAL RESIDUAL CHLORINE

**VOLATILE AROMATICS** 

**VOLATILE HALOCARBONS** 

POTABLE WATER (CHEMISTRY)

Effective

Date

01 JUL 2000

Expiration 30 JUN 2001

Method

1,2-DIBROMOETHANE 1,2-DIBROMO-3-CHLOROPROPANE Analyte

ANTIMONY

ARSENIC

BERYLLIUM BARIUM

CADMIUM

CALCIUM

CHROMIUM

COPPER

CYANIDE

FLUORIDE

LEAD

NICKEL MERCURY

NITRATE-N

NITRITE-N

RESIDUAL FREE CHLORINE

SELENIUM

SODIUM

SULFATE

TOTAL ALKALINITY THALLIUM

TOTAL DISSOLVED SOLIDS

TURBIDITY

**Provisional Certification** 

2

CASE NARRATIVE



### CASE NARRATIVE 0012061

### GENERAL

1. No QC deviations were observed.

### GC/MS-VOLATILES

- The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were not analyzed on 12/16/00 due to instrument anomaly. However, The Laboratory Control Sample LCS-12/16/00 is provided.
- No other QC deviations were observed.

### MADEP-VPH

- The method blank analyzed on 12/11/00 contained Naphthalene at 0.54µg/L below the reporting limit of 5.0µg/L.
- 5 the following exception: sample 0012066-02A. All %R's and %RPD's were within laboratory control limits with The batch Matrix Spike (MS) and Matrix Spike Duplicate (MSD) was performed on
- The %R for Naphthalene was 137% outside the laboratory control limits (70-
- No other QC deviations were observed.

### MADEP-EPH

- surrogate 1-Chlorooctadecane at 33.8% and 39.2% respectively outside the laboratory Samples extraction process. control limits (40-140%) possibly due to a sample emulsion formed during the W-5 (0012061-02C) and W-6 (0012061-03C) had recoveries for the
- 2 No other QC deviations were observed.



### GC/ECD-PCB WATER

- provided. The Matrix Spike Duplicate was not performed due to insufficient sample volume. The Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCS) are
- 2 No other QC deviations were observed.

### GC/ECD-PCB SOIL

- The surrogate Decachlorobiphenyl recovered outside laboratory control limits (36-130%) in sample Debris (0012061-07A) at 464% due to sample specific chromatographic interference.
- 2 No other QC deviations were observed.

### METALS - WATER

- The batch Matrix Spike (MS) and Matrix Spike Duplicate (MSD) for Mercury were acceptance possibly due to matrix interference. performed on sample (0012066-01C). The %R's for MS and MSD were outside the
- 5 Laboratory Control Sample (LCS) recovery was within acceptance limits for all analytes.
- $\dot{n}$ No other QC deviations were observed.

### Massachusetts Department of Environmental Protection (MADEP) Volatile Petroleum Hydrocarbons (VPH) Method 1.0 - January 1998 **AMRO Modifications**

analytes while providing accurate hydrocarbon range data. range being measured. This approach eliminates potential false positives for the target quantified using predominant mass fragmentation ions which are characteristic for the spectrometer (GC/MS) system to analyze samples for VPH. This modification is based on the use of a purge and trap gas chromatography mass The hydrocarbon ranges are

spike and/or matrix spike duplicate is analyzed if sufficient sample is submitted to the minimum, method blank, elution order of specific gasoline components. Batch quality control includes, The chromatographic column is an HP-624 capillary column which has been validated by GC/MS analysis of a gasoline standard to correctly identify the marker compounds and laboratory control sample, and duplicate analysis. A matrix

ranges is approximately 0.6-2.8 mg/kg in soil and 25-110 μg/L in water. The RL of this 5.0 μg/L for water samples. method for the target analytes ranges from approximately 0.05-0.13 mg/kg in soil and 2.0-The Reporting Limit (RL) of this method for each of the collective aliphatic and aromatic

### Massachusetts Department of Environmental Protection (MADEP) Extractable Petroleum Hydrocarbons (EPH) Method 1.0 - January 1998 **AMRO Modifications**

positives for targeted PAH analytes are eliminated by using GC/MS as the primary measured. This approach eliminates the silica gel solid-phase fractionation step. predominant mass fragmentation ions which are characteristic for the range spectrometer analysis technique. This modification is based on a solvent extraction and gas (GC/MS) analysis. The hydrocarbon ranges chromatography are quantified mass being using

analyzed if sufficient sample is submitted to the laboratory. blank, laboratory control sample and duplicate sample analysis. 40 ng/ $\mu$ L. o-Terphenyl and 1-Chlorooctadecane are added as surrogate compounds at Bromonaphthalene, are added to the finished extract prior to analysis instrument performance. Batch quality control includes, at a minimum, a matrix and extraction efficiency. 20  $ng/\mu L$  in the sample extract. These two surrogates monitor the effects of the sample Internal standard calibration is performed using 5α-Androstane at a concentration of The chromatographic column is a J&W Scientific DB-5ms capillary column. Two additional surrogates, 2-Fluorobiphenyl and 2at a minimum, a procedure A matrix spike is to monitor

operating the GC/MS in SIM mode. The Reporting Limit (RL) of this method for each of the collective aliphatic and aromatic ranges is approximately 2-15 mg/kg in soil and 10-50  $\mu$ g/L in water. The RL of this Massachusetts Contingency Plan for water, GC/MS in the Selected Ion Monitoring (SIM) method for the Target PAH analytes ranges from approximately 0.25 to 0.5mg/kg in soil mode is used 1.0μg/L for water when operating the GC/MS in full scan mode, and 0.1 to 1.0μg/L when For sites requiring the lowest levels cited in the

GC/MS VOLATILES- WATER

SW-846 METHOD 8260B

SAMPLE RESULTS

Date: 21-Dec-00

Lab ID: Project: Lab Order: CLIENT: Canton (MDC) 00291 0012061-01A 0012061 GEI Consultants, Inc. Client Sample ID: W-1 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses

Result

Qual Units

 $\mathbf{DF}$ 

Date Analyzed

Spike Recovery outside accepted recovery limits	very outside accep	S - Spike Reco		ND - Not Detected at the Reporting Limit	Qualifiers: ND - Not Dete
12/15/00 7:11:00 PM	_	hg/L	2.0	ND	1,1,1,2-Tetrachloroethane
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Chlorobenzene
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Dibromochloromethane
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Tetrachloroethene
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	1,3-Dichloropropane
12/15/00 7:11:00 PM		µg/L	10	ND	2-Hexanone
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	1,2-Dibromoethane
12/15/00 7:11:00 PM	->	hg/L	2.0	ND	1,1,2-Trichloroethane
12/15/00 7:11:00 PM	<b>-</b>	µg/L	1.0	ND	trans-1,3-Dichloropropene
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Toluene
12/15/00 7:11:00 PM	_	µg/L	1.0	ND	cis-1,3-Dichloropropene
12/15/00 7:11:00 PM	_	µg/L	10	ND	4-Methyl-2-pentanone
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Dibromomethane
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Bromodichloromethane
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	1,2-Dichloropropane
12/15/00 7:11:00 PM	<b></b>	µg/L	2.0	ND	Trichloroethene
12/15/00 7:11:00 PM	_	µg/L	1.0	ND	Benzene
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	1,2-Dichloroethane
12/15/00 7:11:00 PM	<b>&gt;</b>	hg/L	2.0	ND	Carbon tetrachloride
12/15/00 7:11:00 PM	<b>-</b> 3	µg/L	2.0	ND	1,1-Dichloropropene
12/15/00 7:11:00 PM		µg/L	2.0	ND	1,1,1-Trichloroethane
12/15/00 7:11:00 PM	<b>-</b>	hg/L	2.0	ND	Bromochloromethane
12/15/00 7:11:00 PM	<b>-</b>	µg/L	2.0	ND	Chloroform
12/15/00 7:11:00 PM	<u>-</u>	µg/L	2.0	ND	cis-1,2-Dichloroethene
12/15/00 7:11:00 PM	<b>_</b>	µg/L	2.0	ND	2,2-Dichloropropane
12/15/00 7:11:00 PM	<b>-</b>	J/Brl	10	ND	2-Butanone
12/15/00 7:11:00 PM	<u> </u>	µg/L	2.0	ND	1,1-Dichloroethane
12/15/00 7:11:00 PM	<u> </u>	µg/L	2.0	ND	trans-1,2-Dichloroethene
12/15/00 7:11:00 PM	_	µg/L	2.0	ND	Methyl tert-butyl ether
12/15/00 7:11:00 PM	<u>_</u>	hg/L	5.0	ND	Methylene chloride
12/15/00 7:11:00 PM	<u> </u>	hg/L	2.0	ND	Carbon disulfide
12/15/00 7:11:00 PM	_	µg/L	1.0	ND	1,1-Dichloroethene
12/15/00 7:11:00 PM	_	⊔g/L	10	ND	Acetone
12/15/00 7:11:00 PM	<u> </u>	lg/L	2.0	ND	Trichlorofluoromethane
12/15/00 7:11:00 PM	_	µg/L	5.0	ND	Bromomethane
12/15/00 7:11:00 PM	<u> </u>	hg/L	5.0	ND	Chloroethane
12/15/00 7:11:00 PM	<u> </u>	µg/L	2.0	ND	Vinyl chloride
12/15/00 7:11:00 PM	_	hg/L	5.0	ND	Chloromethane
12/15/00 7:11:00 PM		µg/L	5.0	ND	Dichlorodifluoromethane
Analyst: <b>SK</b>			SW8260B	(0	VOLATILES BY GC/MS

* 17.1	B - Analyte detected in the associated Method Blank	J - Analyte detected below quantitation limits	ualitiers: ND - Not Detected at the Reporting Limit
	ted in the associated Method Blank	ed below quantitation limits	at the reporting runnt
E - Valu		R - RPD	S - Spik

ke Recovery outside accepted recovery limits

ue above quantitation range D outside accepted recovery limits

<sup># -</sup> See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-Dec-00

CLIENT: Lab ID: Project: Lab Order: 0012061 0012061-01A Canton (MDC) 00291 GEI Consultants, Inc. Client Sample ID: W-1 Collection Date: 12/5/00 Matrix: AQUEOUS

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Analyses	Kesuit	KL Qua	Qual Units	DF	Date Analyzed
Ethylbenzene	ND	2.0	µg/L		12/15/00 7:11:00 PM
m,p-Xylene	ND	2.0	hg/L	_	12/15/00 7:11:00 PM
o-Xylene	ND	2.0	hg/L		12/15/00 7:11:00 PM
Styrene	ND	2.0	hg/L		12/15/00 7:11:00 PM
Bromoform	ND	2.0	hg/L	<u> </u>	12/15/00 7:11:00 PM
Isopropylbenzene	N	2.0	µg/L		12/15/00 7:11:00 PM
1,1,2,2-Tetrachloroethane	N	2.0	µg/L	<u> </u>	12/15/00 7:11:00 PM
1,2,3-Trichloropropane	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
Bromobenzene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
n-Propylbenzene	ND	2.0	µg/L	<b>-</b>	12/15/00 7:11:00 PM
2-Chlorotoluene	ND	2.0	µg/L	<u></u>	12/15/00 7:11:00 PM
4-Chlorotoluene	ND	2.0	µg/L	<u> </u>	12/15/00 7:11:00 PM
1,3,5-Trimethylbenzene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
tert-Butylbenzene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
1,2,4-Trimethylbenzene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
sec-Butylbenzene	ND	2.0	µg/L	<u>_</u>	12/15/00 7:11:00 PM
4-IsopropyItoluene	ND	2.0	µg/L	<u>-</u>	12/15/00 7:11:00 PM
1,3-Dichlorobenzene	ND	2.0	µg/L		12/15/00 7:11:00 PM
1,4-Dichlorobenzene	ND	2.0	µg/L	<b></b>	12/15/00 7:11:00 PM
n-Butylbenzene	ND	2.0	hg/L		12/15/00 7:11:00 PM
1,2-Dichlorobenzene	ND	2.0	hg/L		12/15/00 7:11:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0	hg/L	_	12/15/00 7:11:00 PM
1,2,4-Trichlorobenzene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
Hexachlorobutadiene	ND	2.0	µg/L	_	12/15/00 7:11:00 PM
Naphthalene	ND	5.0	µg/L	_	12/15/00 7:11:00 PM
1,2,3-Trichlorobenzene	ND	2.0	hg/L	_	12/15/00 7:11:00 PM
Surr: Dibromofluoromethane	96.8	88-120	%REC	-	12/15/00 7:11:00 PM
Surr: 1,2-Dichloroethane-d4	95.7	77-127	%REC		12/15/00 7:11:00 PM
Surr: Toluene-d8	97.6	88-109	%REC	_	12/15/00 7:11:00 PM
Surr: 4-Bromofluorobenzene	97.1	76-109	%REC	-	12/15/00 7:11:00 PM

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ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

E - Value above quantitation range

# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-Dec-00

Lab ID: Project: CLIENT: **Analyses** Lab Order: 0012061 Canton (MDC) 00291 0012061-02A GEI Consultants, Inc. Result Qual Units Client Sample ID: W-5 Collection Date: 12/5/00 Matrix: AQUEOUS  $\mathbf{D}\mathbf{F}$ Date Analyzed

S - Spike Recovery outside accepted recovery limits	very outside acc	S - Spike Reco		the Reporting Limit	ND - Not Detected at the Reporting Limit	Qualifiers:
12/15/00 7:46:00 PM	_	µg/L	2.0	ND D	1,1,1,2-Tetrachloroethane	1,1,1,2-Tet
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	zene	Chlorobenzene
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	Dibromochloromethane	Dibromoch
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	ethene	Tetrachloroethene
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	opropane	1,3-Dichloropropane
12/15/00 7:46:00 PM	_	µg/L	10	ND	æ	2-Hexanone
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	oethane	1,2-Dibromoethane
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	loroethane	1,1,2-Trichloroethane
12/15/00 7:46:00 PM	_	µg/L	1.0	ND	trans-1,3-Dichloropropene	trans-1,3-D
12/15/00 7:46:00 PM	_	µg/L	2.0	ND		Toluene
12/15/00 7:46:00 PM	_	µg/L	1.0	ND	cis-1,3-Dichloropropene	cis-1,3-Dic
12/15/00 7:46:00 PM	_	µg/L	10	ND	-pentanone	4-Methyl-2-pentanone
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	ethane	Dibromomethane
12/15/00 7:46:00 PM	<b>-</b>	µg/L	2.0	ND	Bromodichloromethane	Bromodich
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	opropane	1,2-Dichloropropane
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	hene	Trichloroethene
12/15/00 7:46:00 PM	_	µg/L	1.0	ND		Benzene
12/15/00 7:46:00 PM	<b>-</b>	µg/L	2.0	ND	oethane	1,2-Dichloroethane
12/15/00 7:46:00 PM	<b>→</b>	µg/L	2.0	ND	achloride	Carbon tetrachloride
12/15/00 7:46:00 PM		µg/L	2.0	ND	opropene	1,1-Dichloropropene
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	loroethane	1,1,1-Trichloroethane
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	romethane	Bromochloromethane
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	-	Chloroform
12/15/00 7:46:00 PM	_	μg/L	2.0	ND	hloroethene	cis-1,2-Dichloroethene
12/15/00 7:46:00 PM		µg/L	2.0	ND	opropane	2,2-Dichloropropane
12/15/00 7:46:00 PM	_	µg/L	10	ND	W	2-Butanone
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	oethane	1,1-Dichloroethane
12/15/00 7:46:00 PM	_	μg/L	2.0	ND	trans-1,2-Dichloroethene	trans-1,2-D
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	-butyl ether	Methyl tert-butyl ether
12/15/00 7:46:00 PM	_	µg/L	5.0	ND	chloride	Methylene chloride
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	ulfide	Carbon disulfide
12/15/00 7:46:00 PM	->	µg/L	1.0	ND	oethene	1,1-Dichloroethene
12/15/00 7:46:00 PM	_	µg/L	10	ND		Acetone
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	Trichlorofluoromethane	Trichloroflu
12/15/00 7:46:00 PM	_	µg/L	5.0	ND	nane	Bromomethane
12/15/00 7:46:00 PM	_	µg/L	5.0	ND	ne	Chloroethane
12/15/00 7:46:00 PM	_	µg/L	2.0	ND	de	Vinyl chloride
12/15/00 7:46:00 PM	_	µg/L	5.0	ND	nane	Chloromethane
12/15/00 7:46:00 PM	_	µg/L	5.0	ND	Dichlorodifluoromethane	Dichlorodif
Analyst: <b>SK</b>			SW8260B	SI	VOLATILES BY GC/MS	VOLATILES

	lifiers:
T A	ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

<sup>\* -</sup> Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

<sup># -</sup> See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-Dec-00

Project: CLIENT: Lab ID: Lab Order: 0012061-02A Canton (MDC) 00291 0012061 GEI Consultants, Inc. Client Sample ID: W-5 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses	Result	RL Qua	Qual Units	DF	Date Analyzed
Ethylbenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
m,p-Xylene	ND	2.0	µg/L		12/15/00 7:46:00 PM
o-Xylene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
Styrene	ND	2.0	µg/L	<b>-</b>	12/15/00 7:46:00 PM
Bromoform	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
Isopropylbenzene	ND	2.0	µg/L	<b>-</b>	12/15/00 7:46:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0	hg/L	<u>~</u>	12/15/00 7:46:00 PM
1,2,3-Trichloropropane	ND	2.0	µg/L	<u>~</u>	12/15/00 7:46:00 PM
Bromobenzene	ND	2.0	µg/L	<b>→</b>	12/15/00 7:46:00 PM
n-Propylbenzene	ND	2.0	hg/L	_	12/15/00 7:46:00 PM
2-Chlorotoluene	ND	2.0	µg/L	<b>→</b>	12/15/00 7:46:00 PM
4-Chlorotoluene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
1,3,5-Trimethylbenzene	ND	2.0	μg/L	<u> </u>	12/15/00 7:46:00 PM
tert-Butylbenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
1,2,4-Trimethylbenzene	ND	2.0	µg/L	<u> </u>	12/15/00 7:46:00 PM
sec-Butylbenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
4-Isopropyltoluene	ND	2.0	µg/L	<b>-</b>	12/15/00 7:46:00 PM
1,3-Dichlorobenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
1,4-Dichlorobenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
n-Butylbenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
1,2-Dichlorobenzene	ND	2.0	hg/L		12/15/00 7:46:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0	hg/L	_	12/15/00 7:46:00 PM
1,2,4-Trichlorobenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
Hexachlorobutadiene	ND	2.0	µg/L	<u> </u>	12/15/00 7:46:00 PM
Naphthalene	ND	5.0	µg/L	<b>→</b>	12/15/00 7:46:00 PM
1,2,3-Trichlorobenzene	ND	2.0	µg/L	_	12/15/00 7:46:00 PM
Surr: Dibromofluoromethane	99.0	88-120	%REC	_	12/15/00 7:46:00 PM
Surr: 1,2-Dichloroethane-d4	94.9	77-127	%REC	<u></u>	12/15/00 7:46:00 PM
Surr: Toluene-d8	99.9	88-109	%REC	<b>-</b>	12/15/00 7:46:00 PM
Surr: 4-Bromofluorobenzene	100	76-109	%REC		12/15/00 7:46:00 PM

Qualifiers:
ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Client Sample ID: W-6

Date: 21-Dec-00

CLIENT: Lab Order: 0012061 GEI Consultants, Inc.

Project:

Lab ID:

0012061-03A Canton (MDC) 00291

Collection Date: 12/5/00 Matrix: AQUEOUS

**Analyses** Result RL Qual Units DF **Date Analyzed** 

o - opine receively outside accepted receively illino	covery outside acc	o - Spike ice		ne rebotung rumt	•
ented recovery limits	Overv outside acc	S _ Snike Ber		he Reporting I imit	Onalifiers: ND - Not Detected at the Reporting I imit
12/15/00 8:21:00 PM		µg/L	2.0	ND	1,1,1,2-Tetrachloroethane
12/15/00 8:21:00 PM		µg/L	2.0	4.5	~ Chlorobenzene
12/15/00 8:21:00 PM		µg/L	2.0	ND	Dibromochloromethane
12/15/00 8:21:00 PM	_	µg/L	2.0	N	Tetrachloroethene
12/15/00 8:21:00 PM	_	µg/L	2.0	N	1,3-Dichloropropane
12/15/00 8:21:00 PM	<b>→</b>	µg/L	10	N	2-Hexanone
12/15/00 8:21:00 PM		hg/L	2.0	N	1,2-Dibromoethane
12/15/00 8:21:00 PM	_	µg/L	2.0	N	1,1,2-Trichloroethane
12/15/00 8:21:00 PM	->	µg/L	1.0	ND	trans-1,3-Dichloropropene
12/15/00 8:21:00 PM	_	μg/L	2.0	N	Toluene
12/15/00 8:21:00 PM	_	µg/L	1.0	N	cis-1,3-Dichloropropene
12/15/00 8:21:00 PM	_	µg/L	10	ND	4-Methyl-2-pentanone
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	Dibromomethane
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	Bromodichloromethane
12/15/00 8:21:00 PM		µg/L	2.0	ND	1,2-Dichloropropane
12/15/00 8:21:00 PM		µg/L	2.0	N	Trichloroethene
12/15/00 8:21:00 PM		hg/L	1.0	ND	Benzene
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	1,2-Dichloroethane
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	Carbon tetrachloride
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	1,1-Dichloropropene
12/15/00 8:21:00 PM		µg/L	2.0	ND	1,1,1-Trichloroethane
12/15/00 8:21:00 PM	_	µg/L	2.0	ND	Bromochloromethane
12/15/00 8:21:00 PM	<u></u>	µg/L	2.0	ND	Chloroform
12/15/00 8:21:00 PM	_	µg/Ľ	2.0	ND	cis-1,2-Dichloroethene
12/15/00 8:21:00 PM	_	hg/L	2.0	ND	2,2-Dichloropropane
12/15/00 8:21:00 PM	_	hg/L	10	ND	2-Butanone
12/15/00 8:21:00 PM	_	hg/L	2.0	ND	1,1-Dichloroethane
12/15/00 8:21:00 PM	_	hg/L	2.0	ND	trans-1,2-Dichloroethene
12/15/00 8:21:00 PM	<u></u>	µg/L	2.0	ND	Methyl tert-butyl ether
12/15/00 8:21:00 PM	_	µg/L	5.0	ND	Methylene chloride
12/15/00 8:21:00 PM		hg/L	2.0	ND	Carbon disulfide
12/15/00 8:21:00 PM	_	hg/L	1.0	ND	1,1-Dichloroethene
12/15/00 8:21:00 PM	_	hg/L	10	ND	Acetone
12/15/00 8:21:00 PM	-3	µg/L	2.0	ND	Trichlorofluoromethane
12/15/00 8:21:00 PM	<b>-</b>	µg/L	5.0	ND	Bromomethane
12/15/00 8:21:00 PM	_	µg/L	5.0	ND	Chloroethane
12/15/00 8:21:00 PM	-	hg/L	2.0	ND	Vinyl chloride
12/15/00 8:21:00 PM	_	µg/L	5.0	ND	Chloromethane
12/15/00 8:21:00 PM		µg/L	5.0	ND	Dichlorodifluoromethane
Analyst: <b>SK</b>			SW8260B	SV	VOLATILES BY GC/MS

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Client Sample ID: W-6

Date: 21-Dec-00

Project: CLIENT: Lab Order: Canton (MDC) 00291 0012061 GEI Consultants, Inc. Collection Date: 12/5/00

Lab ID: 0012061-03A Matrix: AQUEOUS

Analyses	Result	RL Qual	Qual Units	DF	Date Analyzed
Ethylbenzene	ND	2.0	µg/L	>	12/15/00 8:21:00 PM
m,p-Xylene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
o-Xylene	ND	2.0	µg/L	<b>-</b>	12/15/00 8:21:00 PM
Styrene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
Bromoform	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
Isopropylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,2,3-Trichloropropane	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
Bromobenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
n-Propylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
2-Chlorotoluene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
4-Chlorotoluene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,3,5-Trimethylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
tert-Butylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,2,4-Trimethylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
sec-Butylbenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
4-Isopropyltoluene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,3-Dichlorobenzene	3.6	2.0	µg/L	_	12/15/00 8:21:00 PM
~ 1,4-Dichlorobenzene	<u></u>	2.0	µg/L	_	12/15/00 8:21:00 PM
n-Butylbenzene	N	2.0	µg/L	_	12/15/00 8:21:00 PM
1,2-Dichlorobenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0	µg/L	_	12/15/00 8:21:00 PM
1,2,4-Trichlorobenzene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
Hexachlorobutadiene	ND	2.0	µg/L	_	12/15/00 8:21:00 PM
Naphthalene	ND	5.0	µg/L		12/15/00 8:21:00 PM
1,2,3-Trichlorobenzene	ND	2.0	µg/L		12/15/00 8:21:00 PM
Surr: Dibromofluoromethane	98.4	88-120	%REC	_	12/15/00 8:21:00 PM
Surr: 1,2-Dichloroethane-d4	101	77-127	%REC	_	12/15/00 8:21:00 PM
Surr: Toluene-d8	98.3	88-109	%REC	_	12/15/00 8:21:00 PM
Surr: 4-Bromofluorobenzene	98.0	76-109	%REC	_	12/15/00 8:21:00 PM

Qualifiers:
ND - Not Detected at the Reporting Limit

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

<sup>\* -</sup> Value exceeds Maximum Contaminant Level

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-Dec-00

Lab ID: Project: CLIENT: Analyses Lab Order: Canton (MDC) 00291 GEI Consultants, Inc. 0012061-04A 0012061 Result Qual Units Client Sample ID: W-10 **Collection Date:** Matrix: AQUEOUS 12/5/00 DF

**Date Analyzed** 

S - Spike Recovery outside accepted recovery limits	overy outside acc	S - Spike Reco		he Reporting Limit	Qualifiers: ND - Not Detected at the Reporting Limit	Qu
12/15/00 8:55:00 PM		hg/L	2.0	ND	1,1,1,2-Tetrachloroethane	<u>-</u> -
12/15/00 8:55:00 PM		µg/L	2.0	ND	Chlorobenzene	오
12/15/00 8:55:00 PM		µg/L	2.0	ND	Dibromochloromethane	말
12/15/00 8:55:00 PM	>	µg/L	2.0	ND	Tetrachloroethene	Тe
12/15/00 8:55:00 PM	_	µg/L	2.0	N	1,3-Dichloropropane	<u> </u>
12/15/00 8:55:00 PM	_	µg/L	10	N	2-Hexanone	2-1
12/15/00 8:55:00 PM		µg/L	2.0	ND	1,2-Dibromoethane	<u> </u>
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	1,1,2-Trichloroethane	<u> </u>
12/15/00 8:55:00 PM	_	µg/L	1.0	ND	trans-1,3-Dichloropropene	tra
12/15/00 8:55:00 PM		µg/L	2.0	ND	Toluene	占
12/15/00 8:55:00 PM	_	µg/L	1.0	ND	cis-1,3-Dichloropropene	Ci.
12/15/00 8:55:00 PM	_	Hg/L	10	ND	4-Methyl-2-pentanone	4-
12/15/00 8:55:00 PM	<b></b> 3	µg/L	2.0	ND	Dibromomethane	₽
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	Bromodichloromethane	В
12/15/00 8:55:00 PM		µg/L	2.0	ND	1,2-Dichloropropane	<u>-</u> -
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	Trichloroethene	벍
12/15/00 8:55:00 PM		µg/L	1.0	ND	Benzene	Be
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	1,2-Dichloroethane	<u>, ,</u>
12/15/00 8:55:00 PM	<u>_</u>	µg/L	2.0	ND	Carbon tetrachloride	င္ပ
12/15/00 8:55:00 PM		µg/L	2.0	N	1,1-Dichloropropene	<u>,                                    </u>
12/15/00 8:55:00 PM	_	µg/L	2.0	N	1,1,1-Trichloroethane	
12/15/00 8:55:00 PM		µg/L	2.0	ND	Bromochloromethane	В
12/15/00 8:55:00 PM	<b>-&gt;</b>	µg/L	2.0	ND	Chloroform	오
12/15/00 8:55:00 PM	<u> </u>	µg/L	2.0	ND	cis-1,2-Dichloroethene	<u>Ci</u> .
12/15/00 8:55:00 PM	<del>-</del>	µg/L	2.0	ND	2,2-Dichloropropane	2,
12/15/00 8:55:00 PM	_	µg/L	10	ND	2-Butanone	2-1
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	1,1-Dichloroethane	_ <u>-</u> `
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	trans-1,2-Dichloroethene	tra
12/15/00 8:55:00 PM	_	µg/L	2.0	B	Methyl tert-butyl ether	X.
12/15/00 8:55:00 PM		µg/L	5.0	ND	Methylene chloride	M€
12/15/00 8:55:00 PM	_	µg/L	2.0	ND	Carbon disulfide	ဂ္ဂ
12/15/00 8:55:00 PM	_	µg/L	1.0	ND	1,1-Dichloroethene	<u>, -</u> ,
12/15/00 8:55:00 PM	<b>→</b>	µg/L	10	ND	Acetone	Ą
12/15/00 8:55:00 PM	_	µg/L	2.0	N	Trichlorofluoromethane	긐
12/15/00 8:55:00 PM	_	µg/L	5.0	N	Bromomethane	₽,
12/15/00 8:55:00 PM	_	µg/L	5.0	N	Chloroethane	오
12/15/00 8:55:00 PM	_	µg/L	2.0	N	Vinyl chloride	<b>≦</b>
12/15/00 8:55:00 PM	_	µg/L	5.0	N N	Chloromethane	오
12/15/00 8:55:00 PM	_	µg/L	5.0	R	Dichlorodifluoromethane	D.
Analyst: <b>SK</b>			SW8260B	S)	VOLATILES BY GC/MS	<u>ک</u>

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- Not Detected at the Reporting Limit
- J Analyte detected below quantitation limits
- B Analyte detected in the associated Method Blank
- \* Value exceeds Maximum Contaminant Level
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits
- E Value above quantitation range
- # See Case Narrative
- RL Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

**Date:** 21-Dec-00

CLIENT:	GEI Consultants, Inc. Client	Client Sample ID: W-10	W-10
Lab Order:	0012061		
Project:	Canton (MDC) 00291 Colle	Collection Date: 12/5/00	12/5/00
Lab ID:	0012061-04A	Matrix:	Matrix: AQUEOUS
*****			

Analyses	Result	RL Qua	Qual Units	DF	Date Analyzed
Ethylbenzene	ND	2.0	µg/L	_	12/15/00 8:55:00 PM
m,p-Xylene	N	2.0	hg/L	_	12/15/00 8:55:00 PM
o-Xylene	ND	2.0	µg/L		12/15/00 8:55:00 PM
Styrene	N	2.0	µg/L		12/15/00 8:55:00 PM
Bromoform	N	2.0	µg/L	_	12/15/00 8:55:00 PM
Isopropylbenzene	N	2.0	hg/L	_	12/15/00 8:55:00 PM
1,1,2,2-Tetrachloroethane	N	2.0	hg/L	_	12/15/00 8:55:00 PM
1,2,3-Trichloropropane	ND	2.0	hg/L	_	12/15/00 8:55:00 PM
Bromobenzene	ND	2.0	hg/L	_	12/15/00 8:55:00 PM
n-Propylbenzene	ND	2.0	µg/L	_	12/15/00 8:55:00 PM
2-Chlorotoluene	ND	2.0	µg/L	_	12/15/00 8:55:00 PM
4-Chlorotoluene	ND	2.0	µg/L		12/15/00 8:55:00 PM
1,3,5-Trimethylbenzene	N	2.0	µg/L		12/15/00 8:55:00 PM
tert-Butylbenzene	ND	2.0	µg/L	>	12/15/00 8:55:00 PM
1,2,4-Trimethylbenzene	ND	2.0	µg/L		12/15/00 8:55:00 PM
sec-Butylbenzene	ND	2.0	µg/L	_	12/15/00 8:55:00 PM
4-Isopropyltoluene	ND	2.0	µg/L	_	12/15/00 8:55:00 PM
1,3-Dichlorobenzene	ND	2.0	µg/L	<b>-</b>	12/15/00 8:55:00 PM
1,4-Dichlorobenzene	ND	2.0	µg/L		12/15/00 8:55:00 PM
n-Butylbenzene	N	2.0	µg/L		12/15/00 8:55:00 PM
1,2-Dichlorobenzene	N N	2.0	µg/L		12/15/00 8:55:00 PM
1,2-Dibromo-3-chloropropane	R	5.0	µg/L	<b>→</b> .	12/15/00 8:55:00 PM
1,2,4-Trichlorobenzene	N	2.0	µg/L	_	12/15/00 8:55:00 PM
Hexachlorobutadiene	N	2.0	µg/L	_	12/15/00 8:55:00 PM
Naphthalene	N	5.0	hg/L	_	12/15/00 8:55:00 PM
1,2,3-Trichlorobenzene	ND	2.0	µg/L		12/15/00 8:55:00 PM
Surr: Dibromofluoromethane	105	88-120	%REC		12/15/00 8:55:00 PM
Surr: 1,2-Dichloroethane-d4	99.0	77-127	%REC		12/15/00 8:55:00 PM
Surr: Toluene-d8	103	88-109	%REC	_	12/15/00 8:55:00 PM
Surr: 4-Bromofluorobenzene	97.8	76-109	%REC	_	12/15/00 8:55:00 PM

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

**Date:** 21-Dec-00

Lab ID: Project: CLIENT: Lab Order: 0012061 Canton (MDC) 00291 0012061-05A GEI Consultants, Inc. Client Sample ID: W-11 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses

Result

Qual Units

DF

Date Analyzed

- Snike Recovery outside accepted recovery limits	overv outside ac	S - Snike Rec		ND - Not Detected at the Reporting Limit	Oualifiers: ND - Not De
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	1,1,1,2-Tetrachloroethane
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	Chlorobenzene
12/16/00 4:07:00 PM		µg/L	2.0	ND	Dibromochloromethane
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	Tetrachloroethene
12/16/00 4:07:00 PM	_	hg/L	2.0	ND	1,3-Dichloropropane
12/16/00 4:07:00 PM	_	µg/L	10	ND	2-Hexanone
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	1,2-Dibromoethane
12/16/00 4:07:00 PM	<u> </u>	µg/L	2.0	ND	1,1,2-Trichloroethane
12/16/00 4:07:00 PM	<b>→</b>	µg/L	1.0	ND	trans-1,3-Dichloropropene
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	Toluene
12/16/00 4:07:00 PM		µg/L	1.0	ND	cis-1,3-Dichloropropene
12/16/00 4:07:00 PM		µg/L	10	ND	4-Methyl-2-pentanone
12/16/00 4:07:00 PM		µg/L	2.0	ND	Dibromomethane
12/16/00 4:07:00 PM		µg/L	2.0	ND	Bromodichloromethane
12/16/00 4:07:00 PM		µg/L	2.0	ND	1,2-Dichloropropane
12/16/00 4:07:00 PM	<b>→</b>	µg/L	2.0	ND	Trichloroethene
12/16/00 4:07:00 PM	<b>→</b>	µg/L	1.0	ND	Benzene
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	1,2-Dichloroethane
12/16/00 4:07:00 PM	<b>→</b>	µg/L	2.0	N	Carbon tetrachloride
12/16/00 4:07:00 PM	_	µg/L	2.0	N	1,1-Dichloropropene
12/16/00 4:07:00 PM	<u> </u>	µg/L	2.0	ND	1,1,1-Trichloroethane
12/16/00 4:07:00 PM	<u></u>	µg/L	2.0	ND	Bromochloromethane
12/16/00 4:07:00 PM	<b>→</b>	µg/L	2.0	ND	Chloroform
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	cis-1,2-Dichloroethene
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	2,2-Dichloropropane
12/16/00 4:07:00 PM	<u> </u>	µg/L	10	ND	2-Butanone
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	1,1-Dichloroethane
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	trans-1,2-Dichloroethene
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	Methyl tert-butyl ether
12/16/00 4:07:00 PM	_	µg/L	5.0	ND	Methylene chloride
12/16/00 4:07:00 PM	_	µg/L	2.0	ND	Carbon disulfide
12/16/00 4:07:00 PM	<b>→</b>	µg/L	1.0	ND	1,1-Dichloroethene
12/16/00 4:07:00 PM	_	µg/L	10	ND	Acetone
12/16/00 4:07:00 PM	<u> </u>	µg/L	2.0	ND	Trichlorofluoromethane
12/16/00 4:07:00 PM	_	µg/L	5.0	ND	Bromomethane
12/16/00 4:07:00 PM	_	µg/L	5.0	ND	Chloroethane
12/16/00 4:07:00 PM	<b>→</b>	µg/L	2.0	ND	Vinyl chloride
12/16/00 4:07:00 PM	_	µg/L	5.0	ND	Chloromethane
12/16/00 4:07:00 PM	-	µg/L	5.0	ND	Dichlorodifluoromethane
Analyst: <b>SK</b>			SW8260B	"	VOLATILES BY GC/MS

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 21-Dec-00

Lab ID: Project: CLIENT: Lab Order: 0012061 0012061-05A Canton (MDC) 00291 GEI Consultants, Inc. Client Sample ID: W-11 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed
Ethylbenzene	ND	2.0	hg/L	_	12/16/00 4:07:00 PM
m,p-Xylene	ND	2.0	µg/L	<u> </u>	12/16/00 4:07:00 PM
o-Xylene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
Styrene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
Bromoform	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
Isopropylbenzene	ND	2.0	µg/L	<u> </u>	12/16/00 4:07:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L	<u> </u>	12/16/00 4:07:00 PM
1,2,3-Trichloropropane	ND	2.0	µg/L	<b>-</b>	12/16/00 4:07:00 PM
Bromobenzene	ND	2.0	µg/L	>	12/16/00 4:07:00 PM
n-Propylbenzene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
2-Chlorotoluene	ND	2.0	µg/L	<u> </u>	12/16/00 4:07:00 PM
4-Chlorotoluene	ND	2.0	⊔g/L	_	12/16/00 4:07:00 PM
1,3,5-Trimethylbenzene	N	2.0	µg/L	-	12/16/00 4:07:00 PM
tert-Butylbenzene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
1,2,4-Trimethylbenzene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
sec-Butylbenzene	ND	2.0	µg/L	<u></u>	12/16/00 4:07:00 PM
4-Isopropyltoluene	N D	2.0	µg/L	_	12/16/00 4:07:00 PM
1,3-Dichlorobenzene	ND	2.0	µg/L	<u> =                                   </u>	12/16/00 4:07:00 PM
1,4-Dichlorobenzene	N D	2.0	µg/L	_	12/16/00 4:07:00 PM
n-Butylbenzene	ND D	2.0	µg/L	_	12/16/00 4:07:00 PM
1,2-Dichlorobenzene	N D	2.0	⊔g/L	<b>-</b>	12/16/00 4:07:00 PM
1,2-Dibromo-3-chloropropane	ND	5.0	J/grl	_	12/16/00 4:07:00 PM
1,2,4-Trichlorobenzene	ND	2.0	µg/L	_	12/16/00 4:07:00 PM
Hexachlorobutadiene	ND	2.0	J/grl		12/16/00 4:07:00 PM
Naphthalene	ND	5.0	µg/L	_	12/16/00 4:07:00 PM
1,2,3-Trichlorobenzene	ND	2.0	hg/L		12/16/00 4:07:00 PM
Surr: Dibromofluoromethane	93.0	88-120	%REC	<b></b>	12/16/00 4:07:00 PM
Surr: 1,2-Dichloroethane-d4	98.3	77-127	%REC		12/16/00 4:07:00 PM
Surr: Toluene-d8	98.2	88-109	%REC		12/16/00 4:07:00 PM
Surr: 4-Bromofluorobenzene	96.7	76-109	%REC	_	12/16/00 4:07:00 PM

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

**Date:** 21-Dec-00

CLIENT: Project: Analyses Lab ID: Lab Order: 0012061 Canton (MDC) 00291 GEI Consultants, Inc. 0012061-06A Result RL Qual Units Client Sample ID: Trip Blank Collection Date: 12/5/00 Matrix: AQUEOUS Date Analyzed

Spike Recovery outside accepted recovery limits	verv outside acce	S - Spike Reco		the Reporting Limit	Oualifiers: ND - Not Detected at the Reporting Limit
12/16/00 4:42:00 PM		µg/L	2.0	ND	1,1,1,2-Tetrachloroethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Chlorobenzene
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Dibromochloromethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Tetrachloroethene
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	1,3-Dichloropropane
12/16/00 4:42:00 PM	_	µg/L	10	ND	2-Hexanone
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	1,2-Dibromoethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	1,1,2-Trichloroethane
12/16/00 4:42:00 PM	_	µg/L	1.0	ND	trans-1,3-Dichloropropene
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Toluene
12/16/00 4:42:00 PM	_	µg/L	1.0	ND	cis-1,3-Dichloropropene
12/16/00 4:42:00 PM		µg/L	10	ND	4-Methyl-2-pentanone
12/16/00 4:42:00 PM		µg/L	2.0	ND	Dibromomethane
12/16/00 4:42:00 PM		µg/L	2.0	ND	Bromodichloromethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	1,2-Dichloropropane
12/16/00 4:42:00 PM		µg/L	2.0	ND	Trichloroethene
12/16/00 4:42:00 PM		µg/L	1.0	ND	Benzene
12/16/00 4:42:00 PM	>	µg/L	2.0	N	1,2-Dichloroethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Carbon tetrachloride
12/16/00 4:42:00 PM		µg/L	2.0	ND	1,1-Dichloropropene
12/16/00 4:42:00 PM	<b>_</b>	µg/L	2.0	ND	1,1,1-Trichloroethane
12/16/00 4:42:00 PM		µg/L	2.0	ND	Bromochloromethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Chloroform
12/16/00 4:42:00 PM	<u> </u>	µg/L	2.0	ND	cis-1,2-Dichloroethene
12/16/00 4:42:00 PM	<b>-</b>	µg/L	2.0	ND	2,2-Dichloropropane
12/16/00 4:42:00 PM	_	µg/L	10	ND	2-Butanone
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	1,1-Dichloroethane
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	trans-1,2-Dichloroethene
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Methyl tert-butyl ether
12/16/00 4:42:00 PM	_	µg/L	5.0	ND	Methylene chloride
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Carbon disulfide
12/16/00 4:42:00 PM	_	µg/L	1.0	ND	1,1-Dichloroethene
12/16/00 4:42:00 PM	_	hg/L	10	ND	Acetone
12/16/00 4:42:00 PM	_	µg/L	2.0	ND	Trichlorofluoromethane
12/16/00 4:42:00 PM	_	µg/L	5.0	ND	Bromomethane
12/16/00 4:42:00 PM	_	J/6rl	5.0	ND	Chloroethane
12/16/00 4:42:00 PM	<b>-</b>	hg/L	2.0	ND	Vinyl chloride
12/16/00 4:42:00 PM	_	hg/L	5.0	ND	Chloromethane
12/16/00 4:42:00 PM	<b>-</b>	µg/L	5.0	ND	Dichlorodifluoromethane
Analyst: <b>SK</b>			SW8260B	(A	VOLATILES BY GC/MS

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	# - See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

METHOD BLANK

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

QC SUMMARY REPORT

**Date:** 28-Dec-00

Method Blank

Sample ID Mblk12/15/00	Batch ID: R6306	Test Code	e: <b>SW8260</b> E	3 Units: μ	g/L		Analysis [	Date <b>12/15</b> /	00 2:28:00 PM	Prep Date	12/15/00	
Client ID:		Run ID:	V-3_0012	215A			SeqNo:	95943				
	QC Sample			QC Spike Orig	inal Sample	:			Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Dichlorodifluoromethane	ND	5.0	μg/L									
Chloromethane	ND	5.0	μg/L									
Vinyl chloride	ND	2.0	μg/L									
Chloroethane	ND	5.0	μg/L									
Bromomethane	ND	5.0	μg/L									
Trichlorofluoromethane	ND	2.0	μg/L									
Acetone	ND	10	μg/L									
1,1-Dichloroethene	ND	1.0	μg/L									
Carbon disulfide	ND	2.0	μg/L									
Methylene chloride	ND	5.0	μg/L									
Methyl tert-butyl ether	ND	2.0	μg/L									
trans-1,2-Dichloroethene	ND	2.0	μg/L									
1,1-Dichloroethane	ND	2.0	μg/L									
2-Butanone	ND ·	10	μg/L			•						
2,2-Dichloropropane	ND	2.0	μg/L									
cis-1,2-Dichloroethene	ND	2.0	μg/L									
Chloroform	ND	2.0	μg/L									
Bromochloromethane	ND	2.0	μg/L									
1,1,1-Trichloroethane	ND	2.0	μg/L									
1,1-Dichloropropene	ND	2.0	μg/L									
Carbon tetrachloride	ND	2.0	μg/L									
1,2-Dichloroethane	ND	2.0	μg/ <b>L</b>									
Benzene	ND	1.0	μg/L									
Trichloroethene	ND	2.0	μg/L									
1,2-Dichloropropane	ND	2.0	μg/L									

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 28-Dec-00

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GEI Consultants, Inc.

Work Order:

0012061

ork Order: 00120

Canton (MDC) 00291

**QC SUMMARY REPORT** 

Method Blank

Project: Canton (MD	C) 00291			Metho
Bromodichloromethane	ND	2.0	μg/L	
Dibromomethane	ND	2.0	μg/L	
4-Methyl-2-pentanone	ND	10	μg/L	
cis-1,3-Dichloropropene	ND	1.0	μg/L	
Toluene	ND	2.0	μg/L	
rans-1,3-Dichloropropene	ND	1.0	μg/L	
,1,2-Trichloroethane	ND	2.0	μg/L	
1,2-Dibromoethane	ND	2.0	μg/L	
?-Hexanone	ND	10	μg/L	
,3-Dichloropropane	ND	2.0	μg/L	
Tetrachloroethene	ND	2.0	μg/L	
Dibromochloromethane	ND	2.0	μg/L	
Chlorobenzene	ND	2.0	μg/L	
,1,1,2-Tetrachloroethane	ND	2.0	μg/L	
Ethylbenzene	ND	2.0	μg/L	
n,p-Xylene	ND	2.0	μg/L	
-Xylene	ND	2.0	μg/L	
Styrene	ND	2.0	μg/L	
Bromoform	ND	2.0	μg/L	
sopropylbenzene	ND	2.0	μg/L	
,1,2,2-Tetrachloroethane	ND	2.0	μg/L	
,2,3-Trichloropropane	ND	2.0	μg/L	
Bromobenzene	ND	2.0	μg/L	
-Propylbenzene	ND	2.0	μg/L	
-Chlorotoluene	ND	2.0	μg/L	
-Chlorotoluene	ND	2.0	μg/L	
,3,5-Trimethylbenzene	ND	2.0	μg/L	
ert-Butylbenzene	ND	2.0	μg/L	
,2,4-Trimethylbenzene	ND	2.0	μg/L	
ec-Butylbenzene	ND	2.0	μg/L	
1-isopropyitoluene	ND	2.0	μg/L	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

**Date:** 28-Dec-00

<b>Work Order:</b> 0012061	sultants, Inc.  MDC) 00291							•	QC SUMMA	RY REPORT Method Blank
1,3-Dichlorobenzene	ND	2.0	μg/L							
1,4-Dichlorobenzene	ND	2.0	μg/L							
n-Butylbenzene	ND	2.0	μg/L							
1,2-Dichlorobenzene	ND	2.0	μg/L							
1,2-Dibromo-3-chloropropane	ND	5.0	μg/L							
1,2,4-Trichlorobenzene	ND	2.0	μg/L							
Hexachlorobutadiene	ND	2.0	μg/L							
Naphthalene	ND	5.0	μg/L							
1,2,3-Trichlorobenzene	ND	2.0	μg/L							
Surr: Dibromofluoromethane	24.33	2.0	μg/L	25	0	97.3	88	120	0	
Surr: 1,2-Dichloroethane-d4	25.22	2.0	μg/L	25	0	101	77	127	0	
Surr: Toluene-d8	24.58	2.0	μg/L	25	0	98.3	88	109	0	
Surr: 4-Bromofluorobenzene	24.52	2.0	μg/L	25	0	98.1	76	109	0	

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

### QC SUMMARY REPORT

Date: 28-Dec-00

Method Blank

Sample ID Mblk12/16/00	Batch ID: R6308	Test Code	e: <b>SW8260B</b>	Units: µg	/L		Analysis I	Date <b>12/16/</b> 0	00 3:32:00 PM	Prep Date	12/16/00	
Client ID:		Run ID:	V-3_00121	16A			SeqNo:	95974				
	QC Sample		!	QC Spike Origir	nal Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Dichlorodifluoromethane	ND	5.0	μg/L									
Chloromethane	ND	5.0	μg/L									
Vinyl chloride	ND	2.0	μg/L									
Chloroethane	ND	5.0	μg/L									
Bromomethane	ND	5.0	μg/L									
Trichlorofluoromethane	ND	2.0	μg/L									
Acetone	ND	10	μg/L									
1,1-Dichloroethene	ND	1.0	μg/L									
Carbon disulfide	ND	2.0	μg/L									
Methylene chloride	ND	5.0	μg/L									
Methyl tert-butyl ether	ND	2.0	μg/L									
trans-1,2-Dichloroethene	ND	2.0	μg/L									
1,1-Dichloroethane	ND	2.0	μg/L									
2-Butanone	ND	10	μg/L									
2,2-Dichloropropane	ND	2.0	μg/L									
cis-1,2-Dichloroethene	ND	2.0	μg/L									
Chloroform	ND	2.0	μg/L									
Bromochloromethane	ND	2.0	μg/L									
1,1,1-Trichloroethane	ND	2.0	μg/L									
1,1-Dichloropropene	ND	2.0	μg/L									
Carbon tetrachloride	ND	2.0	μg/L									
1,2-Dichloroethane	ND	2.0	μg/L									
Benzene	ND	1.0	μg/L									
Trichloroethene	ND	2.0	μg/L					•				
1,2-Dichloropropane	ND	2.0	μg/L									

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL -  $Reporting\ Limit;$  defined as the lowest concentration the laboratory can accurately quantitate.

**Date:** 28-Dec-00

CLIENT:
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GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

QC SUMMARY RE	3 <b>P</b> (	JRT
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Method Blank

Project: Canton (MD)	C) 00291				Memou Diam
Bromodichloromethane	ND	2.0	μg/L	 	 
Dibromomethane	ND	2.0	μg/L		
4-Methyl-2-pentanone	ND	10	μg/L		
cis-1,3-Dichloropropene	ND	1.0	μg/L		
Toluene	ND	2.0	μg/L		
rans-1,3-Dichloropropene	ND	1.0	μg/L		
1,1,2-Trichloroethane	ND	2.0	μg/L		
1,2-Dibromoethane	ND	2.0	μg/L		
2-Hexanone	ND	10	μg/L		
1,3-Dichloropropane	ND ·	2.0	μg/L		
Tetrachloroethene	ND	2.0	μg/L		
Dibromochloromethane	ND	2.0	μg/L		
Chlorobenzene	ND	2.0	μg/L		
,1,1,2-Tetrachloroethane	ND	2.0	μg/L		
Ethylbenzene	ND	2.0	μg/L		
n,p-Xylene	ND	2.0	μg/L		
p-Xylene	ND	2.0	μg/L		
Styrene	ND	2.0	μg/L		
Bromoform	ND	2.0	μg/L		
sopropylbenzene	ND.	2.0	μg/L		
,1,2,2-Tetrachloroethane	NÐ	2.0	μg/L		
,2,3-Trichloropropane	ND	2.0	μg/L		
Bromobenzene	ND	2.0	μg/L		
n-Propylbenzene	ND	2.0	μg/L		
2-Chlorotoluene	ND	2.0	μg/L		
1-Chiorotoluene	ND	2.0	μg/L		
,3,5-Trimethylbenzene	ND	2.0	μg/L		
ert-Butylbenzene	ND	2.0	μg/L		
,2,4-Trimethylbenzene	ND	2.0	μg/L		
ec-Butylbenzene	ND	2.0	μg/L		
1-Isopropyltoluene	ND	2.0	μg/L		

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT: GE	I Consultants, Inc.								OC STIMM	ADV DEDODE
Work Order: 001	2061							'	QC SUMML	ARY REPORT
Project: Can	ton (MDC) 00291									Method Blank
1,3-Dichlorobenzene	ND	2.0	μg/L							
1,4-Dichlorobenzene	ND	2.0	μg/L							
n-Butylbenzene	ND	2.0	μg/L							
1,2-Dichlorobenzene	ND	2.0	μg/L							
1,2-Dibromo-3-chloroprop	oane ND	5.0	μg/L							
1,2,4-Trichlorobenzene	ND	2.0	μg/L							
Hexachlorobutadiene	ND	2.0	μg/L							
Naphthalene	ND	5.0	μg/L							
1,2,3-Trichlorobenzene	ND	2.0	μg/L							
Surr: Dibromofluorome	thane 23.61	2.0	μ <b>g/L</b>	25	0	94.4	88	120	0	
Surr: 1,2-Dichloroethan	ie-d4 24.15	2.0	μg/L	25	0	96.6	77	127	0	
Surr: Toluene-d8	24.28	2.0	μg/L	25	0	97.1	88	109	0	
Surr: 4-Bromofluorober	nzene 25.83	2.0	μg/L	25	0	103	76	109	0	

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

**Date:** 28-Dec-00

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

Date: 28-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike

Sample ID 0012061-01Ams	Batch ID: R6306	Test Code	e: SW8260	B Units։ µ	ıg/L		Analysis i	Date <b>12/15/0</b>	00 9:31:00 PM	Prep Dat	e <b>12/15/00</b>	-
Client ID: W-1		Run ID:	V-3_001	215A			SeqNo:	95955				
	QC Sample			QC Spike Orig	ginal Sample	÷		•	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
1,1-Dichloroethene	125	5.0	μg/L	100	0	125	71	130	0			
Benzene	113.4	5.0	μg/L	100	0	113	75	127	0			
Trichloroethene	113.3	10	μg/L	100	0	113	77	121	0			
Toluene	112	10	μg/L	100	0	112	80	121	0			
Chlorobenzene	107	10	μg/L	100	0	107	84	120	0			
Surr: Dibromofluoromethane	118.6	10	μg/L	125	0	94.9	88	120	0			
Surr: 1,2-Dichloroethane-d4	122.3	10	μg/L	125	0	97.8	77	127	0			
Surr: Toluene-d8	123.1	10	μg/L	125	0	98.5	88	109	0			
Surr: 4-Bromofluorobenzene	124.4	10	μg/L	125	0	99.6	76	109	0			
Sample ID 0012061-01Amsd	Batch ID: R6306	Test Code	e: SW8260	3 Units: μ	g/L		Analysis I	Date 12/15/0	0 10:05:00 PM	Prep Date	e <b>12/15/00</b>	
Client ID: W-1		Run ID:	V-3_001	215A			SeqNo:	95956				
	QC Sample			QC Spike Orig	jinal Sample	<b>:</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
1,1-Dichloroethene	119.2	5.0	μg/L	100	0	119	71	130	125	4.71	25	
Benzene	104.7	5.0	μg/L	100	0	105	75	127	113.4	7.98	25	
Trichloroethene	110	10	μg/L	100	0	110	77	121	113.3	2.91	25	
Toluene	102.2	10	μg/L	100	0	102	80	121	112	9.15	25	
Chlorobenzene	99.1	10	μg/L	100	0	99.1	84	120	107	7.67	25	
Surr: Dibromofluoromethane	117.6	10	μg/L	125	0	94	88	120	0	0	0	
Surr: 1,2-Dichloroethane-d4	122.1	10	μg/L	125	0	97.7	77	127	0	0	0	
	120.1	10	μg/L	125	0	96.1	88	109	0	0	0	
Surr: Toluene-d8												

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

LABORATORY CONTROL SAMPLE

1.44

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

### **Date:** 28-Dec-00

### **QC SUMMARY REPORT**

Laboratory Control Spike

Sample ID Ics 12/15/00	Batch ID: R6306	Test Code	e: <b>SW8260B</b>	Units: µ	g/L		Analysis I	Date <b>12/15/</b> 0	00 1:17:00 PM	Prep Dat	e <b>12/15/00</b>	
Client ID:		Run ID:	V-3_00121	15A			SeqNo:	95942				
	QC Sample			QC Spike Orig	jinal Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qι
1,1-Dichloroethene	24.54	1.0	μg/L	20	0	123	77	131	0			
Benzene	22.34	1.0	μg/L	20	0	112	79	121	0			
Trichloroethene	22.37	2.0	μg/L	20	0	112	84	116	0			
Toluene	22.13	2.0	μg/L	20	0	111	84	116	0			
Chlorobenzene	21.89	2.0	μg/L	20	0	109	86	116	0			
Surr: Dibromofluoromethane	23.47	2.0	μg/L	25	0	93.9	88	120	0			
Surr: 1,2-Dichloroethane-d4	24.86	2.0	μg/L	25	0	99.4	77	127	0			
Surr: Toluene-d8	23.79	2.0	μg/L	25	0	95.2	88	109	0			
Surr: 4-Bromofluorobenzene	25.01	2.0	μg/L	25	0	100	76	109	0			
Sample ID Ics 12/16/00	Batch ID: R6308	Test Code	e: SW8260B	Units: μ	g/L		Analysis [	Date 12/16/0	00 2:22:00 PM	Prep Date	e 12/16/00	****
Client ID:		Run ID:	V-3_00121	I6A			SeqNo:	95973				
	QC Sample		(	QC Spike Orig	inal Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
1,1-Dichloroethene	22.54	1.0	μg/L	20	0	113	77	131	0			
Benzene	21.37	1.0	μg/L	20	0	107	79	121	0			
Trichloroethene	21.33	2.0	μg/L	20	0	107	84	116	0			
Toluene	21.26	2.0	μg/L	20	0	106	84	116	0			
Chlorobenzene	20.36	2.0	μg/L	20	0	102	86	116	0			
Surr: Dibromofluoromethane	24.65	2.0	μg/L	25	0	98.6	88	120	0			
Surr: 1,2-Dichloroethane-d4	24.86	2.0	μg/L	25	0	99.4	77	127	0			
Surr: Toluene-d8	24.42	2.0	μg/L	25	0	97.7	88	109	0			
	24.89	2.0	μg/L	25	0	99.6	76	109	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

# VOLATILE PETROLEUM HYDROCARBONS (VPH) WATER

SAMPLE RESULTS

Date: 21-Dec-00

Lab Order: CLIENT: Lab ID: Project: 0012061 Canton (MDC) 00291 GEI Consultants, Inc. 0012061-01B Client Sample ID: Collection Date: Tag Number: Matrix: **AQUEOUS** W-1 12/5/00

Analyses

Result

RL

Qual Units

Date Analyzed

VOLATILE PETROLEUM HYDROCARBONS		MAVPH			Analyst: <b>SK</b>
C5-C8 Aliphatic Hydrocarbons	B	100	hg/L	_	12/12/00 12:18:00 AM
C9-C12 Aliphatic Hydrocarbons	N	25	µg/L	<u>_</u>	12/12/00 12:18:00 AM
C9-C10 Aromatic Hydrocarbons	N N	25	µg/L	<b>-</b>	12/12/00 12:18:00 AM
Methyl tert-butyl ether	P	2.0	µg/L	_	12/12/00 12:18:00 AM
Benzene	N	2.0	µg/L	_	12/12/00 12:18:00 AM
Toluene	N N	2.0	hg/L		12/12/00 12:18:00 AM
Ethylbenzene	N U	2.0	hg/L		12/12/00 12:18:00 AM
m,p-Xylene	N U	2.0	µg/L	_	12/12/00 12:18:00 AM
o-Xylene	N D	2.0	µg/L	<b>-</b>	12/12/00 12:18:00 AM
Naphthalene	N	5.0	µg/L	<u></u>	12/12/00 12:18:00 AM
Surr: 1,2-Dichloroethane-d4	87.4	70-130	%REC	_	12/12/00 12:18:00 AM
Surr: 2,5-Dibromotoluene	87.0	70-130	%REC	_	12/12/00 12:18:00 AM
Surr: 4-Bromofluorobenzene	97.3	70-130	%REC	-3	12/12/00 12:18:00 AM
Surr: Dibromofluoromethane	96.2	70-130	%REC	_	12/12/00 12:18:00 AM
Surr: Toluene-d8	94.0	70-130	%REC	_	12/12/00 12:18:00 AM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved: Yes Yes

No - If No, See Case Narrative

No - If No, See Case Narrative

Were any significant modifications made to the method as specified in section 11.3: \_\_\_\_\_\_No \_\_\_\_Yes - Details enclosed I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material cypitained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE: DATE: らとらわ

POSITION: Laboratory Director (or designee)

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

PRINTED NAME: Sheena Blair

R - RPD outside accepted recovery limits S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits

Date: 21-Dec-00

CLIENT: Project: Analyses Lab ID: Lab Order: Canton (MDC) 00291 0012061-02B 0012061 GEI Consultants, Inc. Result RL Qual Units Client Sample ID: Collection Date: Tag Number: Matrix: 12/5/00 **AQUEOUS** W-5 DF Date Analyzed

				1	
VOLATILE PETROLEUM HYDROCARBONS		MAVPH			Analyst: <b>SK</b>
C5-C8 Aliphatic Hydrocarbons	S	100	µg/L	<u> </u>	12/12/00 12:54:00 AM
C9-C12 Aliphatic Hydrocarbons	N N	25	µg/L	<u> </u>	12/12/00 12:54:00 AM
C9-C10 Aromatic Hydrocarbons	몽	25	hg/L	_	12/12/00 12:54:00 AM
Methyl tert-butyl ether	S	2.0	hg/L	<b>-</b>	12/12/00 12:54:00 AM
Benzene	R	2.0	µg/L	_	12/12/00 12:54:00 AM
Toluene	몽	2.0	µg/L	-	12/12/00 12:54:00 AM
Ethylbenzene	R	2.0	µg/L	_	12/12/00 12:54:00 AM
m,p-Xylene	R	2.0	µg/L	_	12/12/00 12:54:00 AM
o-Xylene	R	2.0	µg/L	_	12/12/00 12:54:00 AM
Naphthalene	Š	5.0	µg/L	_	12/12/00 12:54:00 AM
Surr: 1,2-Dichloroethane-d4	85.8	70-130	%REC		12/12/00 12:54:00 AM
Surr: 2,5-Dibromotoluene	88.8	70-130	%REC	<b>-</b>	12/12/00 12:54:00 AM
Surr: 4-Bromofluorobenzene	94.5	70-130	%REC		12/12/00 12:54:00 AM
Surr: Dibromofluoromethane	97.7	70-130	%REC	<b>-</b>	12/12/00 12:54:00 AM
Surr: Toluene-d8	94.8	70-130	%REC	<del>-</del>	12/12/00 12:54:00 AM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Were any significant modifications made to the method as specified in section 11.3: Yes Yes I No Yes - Details enclosed

No - If No, See Case Narrative No - If No, See Case Narrative

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:

PRINTED NAME: Sheena Blair

DATE:

ころしかり

POSITION: Laboratory Director (or designee)

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

> # - See Case Narrative E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Date: 21-Dec-00

Lab ID: Project: CLIENT: VOLATILE PETROLEUM HYDROCARBONS Analyses Lab Order: C9-C12 Aliphatic Hydrocarbons Naphthalene Ethylbenzene Methyl tert-butyl ether C9-C10 Aromatic Hydrocarbons C5-C8 Aliphatic Hydrocarbons Surr: 4-Bromofluorobenzene Surr: Toluene-d8 Surr: Dibromofluoromethane Surr: 2,5-Dibromotoluene Surr: 1,2-Dichloroethane-d4 0012061 0012061-03B Canton (MDC) 00291 GEI Consultants, Inc. Result 95.2 86.2 93.0 100 N R R B B R B N MAVPH 70-130 70-130 70-130 70-130 70-130 5.0 2.0 2.0 2.0 2.0 2.0 2.0 25 Qual Client Sample ID: hg/L J∕br Units **Collection Date:** µg/L µg/L µg/L J/g∕L %REC %REC %REC %REC %REC µg/L J/g₁ l/g/L Tag Number: Matrix: **AQUEOUS** W-6 12/5/00 12/12/00 1:29:00 AM Date Analyzed

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

No - If No, See Case Narrative No - If No, See Case Narrative

Were any significant modifications made to the method as specified in section 11.3: Yes Yes

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. N<sub>O</sub> Yes - Details enclosed

SIGNATURE:

PRINTED NAME: Sheena Blaif

DATE:

10-16-6.

POSITION: Laboratory Director (or designee)

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

R - RPD outside accepted recovery limits S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits

Date: 21-Dec-00

Project: CLIENT: Analyses Lab ID: Lab Order: Canton (MDC) 00291 0012061 0012061-04B GEI Consultants, Inc. Result Qual Units Client Sample ID: **Collection Date:** Tag Number: Matrix: **AQUEOUS** W-10 DF 12/5/00 Date Analyzed

ΜA	WPH			Analyst: SK
P	100	µg/L	_	12/12/00 2:05:00 AM
P	25	hg/L	_	12/12/00 2:05:00 AM
D	25	hg/L	<b>-</b>	12/12/00 2:05:00 AM
B	2.0	µg/L	_	12/12/00 2:05:00 AM
N D	2.0	J/grt	_	12/12/00 2:05:00 AM
A N	2.0	µg/L	_	12/12/00 2:05:00 AM
D	2.0	µg/L	_	12/12/00 2:05:00 AM
N	2.0	µg/L		12/12/00 2:05:00 AM
Ŗ	2.0	µg/L	_	12/12/00 2:05:00 AM
B	5.0	µg/L	_	12/12/00 2:05:00 AM
85.3	70-130	%REC		12/12/00 2:05:00 AM
88.0	70-130	%REC		12/12/00 2:05:00 AM
96.5	70-130	%REC		12/12/00 2:05:00 AM
98.1	70-130	%REC		12/12/00 2:05:00 AM
94.4	70-130	%REC	<u> </u>	12/12/00 2:05:00 AM
		MAV	MAVPH  100 25 25 2.0 2.0 2.0 2.0 2.0 2.0 70-130 70-130 70-130 70-130	MAVPH  100 25 25 20 2.0 2.0 2.0 2.0 2.0 2.0 70-130 70-130 70-130 70-130

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Were any significant modifications made to the method as specified in section 11.3: Yes I No No - If No, See Case Narrative Yes - Details enclosed

No - If No, See Case Narrative

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

クタノタク

DATE:

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate. PRINTED NAME: Sheena Blair

SIGNATURE:

ND - Not Detected at the Reporting Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

# - See Case Narrative

Date:

21-Dec-00

Project: CLIENT: Analyses Lab ID: Lab Order: 0012061-05B Canton (MDC) 00291 0012061 GEI Consultants, Inc. Result Qual Units Client Sample ID: **Collection Date:** Tag Number: Matrix: AQUEOUS 12/5/00 W-11 DF **Date Analyzed** 

VOLATILE PETROLEUM HYDROCARBONS	_	MAVPH			Analyst: <b>SK</b>
C5-C8 Aliphatic Hydrocarbons	ND	100	µg/L	_	12/12/00 2:41:00 AM
C9-C12 Aliphatic Hydrocarbons	ND	25	µg/L	_	12/12/00 2:41:00 AM
C9-C10 Aromatic Hydrocarbons	ND	25	µg/L	<b>-</b>	12/12/00 2:41:00 AM
Methyl tert-butyl ether	ND	2.0	µg/L	_	12/12/00 2:41:00 AM
Benzene	N	2.0	hg/L	<b>-</b>	12/12/00 2:41:00 AM
Toluene	ND	2.0	µg/L	<b>-</b>	12/12/00 2:41:00 AM
Ethylbenzene	ND	2.0	µg/L	_	12/12/00 2:41:00 AM
m,p-Xylene	ND	2.0	hg/L	_	12/12/00 2:41:00 AM
o-Xylene	ND	2.0	µg/L	_	12/12/00 2:41:00 AM
Naphthalene	N	5.0	µg/L	_	12/12/00 2:41:00 AM
Surr: 1,2-Dichloroethane-d4	89.4	70-130	%REC	_	12/12/00 2:41:00 AM
Surr: 2,5-Dibromotoluene	85.8	70-130	%REC	<b>-</b>	12/12/00 2:41:00 AM
Surr: 4-Bromofluorobenzene	91.8	70-130	%REC	<b>-</b>	12/12/00 2:41:00 AM
Surr: Dibromofluoromethane	95.4	70-130	%REC	<u></u>	12/12/00 2:41:00 AM
Surr: Toluene-d8	94.8	70-130	%REC	<u>~</u>	12/12/00 2:41:00 AM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Yes

Were any significant modifications made to the method as specified in section 11.3: I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the ۱ ح Yes - Details enclosed

No - If No, See Case Narrative

No - If No, See Case Narrative

information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE: PRINTED NAME: Sheena Blair

DATE:

(2010c)

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

J - Analyte detected below quantitation limits B - Analyte detected in the associated Method Blank R - RPD outside accepted recovery limits

METHOD BLANK

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 15-Dec-00

QC SUMMARY REPORT Method Blank

Sample ID mblk12/11/00	Batch ID: R6220	Test Code	: MAVPH	Units: µg/	/L:		Analysis [	Date 12/11/0	0 12:09:00 PM	Prep Date	e <b>12/11/00</b>	
Client ID:		Run ID:	V-2_0012	211A			SeqNo:	94328				
	QC Sample			QC Spike Origin	nal Sample	:		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L									
C9-C12 Aliphatic Hydrocarbons	ND	25	μg/L									
C9-C10 Aromatic Hydrocarbons	ND	25	μg/L									
Methyl tert-butyl ether	ND	2.0	μg/L									
Benzene	ND	2.0	μg/L									
Toluene	ND	2.0	μg/L									
Ethylbenzene	ND	2.0	μg/L									
m,p-Xylene	ND	2.0	μg/L									
o-Xylene	ND	2.0	μg/L									
Naphthalene	0.54	5.0	μg/L									J
Surr: 1,2-Dichloroethane-d4	22.27	0	μg/L	25	0	89.1	70	130	0			
Surr: 2,5-Dibromotoluene	24.92	0	μg/L	25	0	99.7	70	130	0			
Surr: 4-Bromofluorobenzene	23.97	0	μg/L	25	0	95.9	70	130	0			
Surr: Dibromofluoromethane	24.27	0	μg/L	25	0	97.1	70	130	0			
Surr: Toluene-d8	23.38	0	μg/L	25	0	93.5	70	130	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

Date: 15-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike

Sample ID 0012066-02Ams	Batch ID: R6220	Test Cod	e: MAVPH	Units: μ	ıg/L		Analysis I	Date <b>12/12/0</b>	0 6:15:00 AM	Prep Date	12/11/00	
Client ID:		Run ID:	V-2_0012	211A			SeqNo:	94357				
	QC Sample			QC Spike Ori	ginal Sample			(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Methyl tert-butyl ether	97.8	10	μg/L	100	0	97.8	70	130	0			
Benzene	85.55	10	μg/L	100	3.71	81.8	70	130	0			
Toluene	112.4	10	μg/L	100	0	112	70	130	0			
Ethylbenzene	108.9	10	μg/L	100	1.71	107	70	130	0			
m,p-Xylene	217.4	10	μg/L	200	2.7	107	70	130	0			
o-Xylene	111.2	10	μg/L	100	7.21	104	70	130	0			
Naphthalene	329.3	25	μg/L	100	192.6	137	70	130	0			s
Surr: 1,2-Dichloroethane-d4	104.7	0	μg/L	125	0	83.8	70	130	0			
Surr: 2,5-Dibromotoluene	110.2	0	μg/L	125	0	88.2	70	130	0			
Surr: 4-Bromofluorobenzene	122	0	μg/L	125	0	97.6	70	130	0			
Surr: Dibromofluoromethane	125.5	0	μg/L	125	0	100	70	130	0			
Surr: Toluene-d8	116.8	0	μg/L	125	0	93.4	70	130	0			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

Date: 15-Dec-00

### QC SUMMARY REPORT

Sample Matrix Spike Duplicate

Sample ID 0012066-02Amsd	Batch ID: R6220	Test Cod	le: MAVPH	Units: µ	ıg/L		Analysis [	Date <b>12/12/0</b>	0 6:50:00 AM	Prep Dat	e 12/11/00	
Client ID:		Run ID:	V-2_0012	211A			SeqNo:	94358				
	QC Sample			QC Spike Orig	ginal Sample	<b>;</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Methyl tert-butyl ether	90.2	10	μg/L	100	0	90.2	70	130	97.8	8.09	50	
Benzene	84.35	10	μg/L	100	3.71	80.6	70	130	85.55	1.41	50	
Toluene	112.2	10	μg/L	100	0	112	70	130	112.4	0.267	50	
Ethylbenzene	107.5	10	μg/L	100	1.71	106	70	130	108.9	1.34	50	
m,p-Xylene	213.2	10	μg/L	200	2.7	105	70	130	217.4	1.95	50	
o-Xylene	108.4	10	μg/L	100	7.21	101	70	130	111.2	2.5	50	
Naphthalene	298	25	μg/L	100	192.6	105	70	130	329.3	10	50	
Surr: 1,2-Dichloroethane-d4	105.8	0	μg/L	125	0	84.6	70	130	0	0	0	
Surr: 2,5-Dibromotoluene	109.7	0	μg/L	125	0	87.8	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	118.6	0	μg/L	125	0	94.9	70	130	0	0	0	
Surr: Dibromofluoromethane	122.6	0	μg/L	125	0	98.1	70	130	0	0	0	
Surr: Toluene-d8	119	0	μg/L	125	0	95.2	70	130	0	0	0	

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

SAMPLE AND SAMPLE DUPLICATE

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 15-Dec-00

### **QC SUMMARY REPORT**

Sample Duplicate

Sample ID 0012066-01Adup	Batch ID: R6220	Test Cod	e: MAVPH	Units: μ	g/L		Analysis [	Date 12/12/0	0 5:03:00 AM	Prep Date	e 12/11/00	
Client ID:		Run ID:	V-2_0012	211A			SeqNo:	94355				
	QC Sample			QC Spike Orig	ginal Sample	!		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qı
C5-C8 Aliphatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0	0	50	
C9-C12 Aliphatic Hydrocarbons	ND	25	μg/L	0	0	0	0	0	0	0	50	
C9-C10 Aromatic Hydrocarbons	ND	25	μg/L	0	0	0	0	0	0	0	50	
Methyl tert-butyl ether	ND	2.0	μg/L	0	0	0	0	0	0	0	50	
Benzene	3.1	2.0	μg/L	0	0	0	0	0	3.28	5.64	50	
Toluene	ND	2.0	μg/L	0	0	0	0	0	0	0	50	
Ethylbenzene	ND	2.0	μg/L	0	0	0	0	0	0	0	50	
m,p-Xylene	ND	2.0	μg/L	0	0	0	0	0	0	0	50	
o-Xylene	ND	2.0	μg/L	0	0	0	0	0	0	0	50	
Naphthalene	ND	5.0	μg/L	0	0	0	0	0	0	0	50	
Surr: 1,2-Dichloroethane-d4	21.18	0	μg/L	25	0	84.7	70	130	0	0	0	
Surr: 2,5-Dibromotoluene	22.36	0	μg/L	25	0	89.4	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	23.86	0	μg/L	25	0	95.4	70	130	0	0	0	
Surr: Dibromofluoromethane	22.79	0	μg/L	25	0	91.2	70	130	0	0	0	
Surr: Toluene-d8	22.89	0	μg/L	25	0	91.6	70	130	0	. 0	0	

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

LABORATORY CONTROL SAMPLE

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

### QC SUMMARY REPORT

Laboratory Control Spike

Date: 15-Dec-00

Sample ID Ics12/11/00	Batch ID: R6220	Test Cod	e: MAVPH	Units: µ	ıg/L		Analysis I	Date 12/11/0	0 10:57:00 AM	Prep Date	e 12/11/00	
Client ID:		Run ID:	V-2_0012	211A			SeqNo:	94327				
	QC Sample			QC Spike Orig	ginal Sample	<b>;</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Methyl tert-butyl ether	19.75	2.0	μg/L	20	0	98.8	70	130	0			
Benzene	15.93	2.0	μg/L	20	0	79.6	70	130	0			
Toluene	21.59	2.0	μg/L	20	0	108	70	130	0			
Ethylbenzene	20.85	2.0	μg/L	20	0	104	70	130	0			
m,p-Xylene	42.24	2.0	μg/L	40	0	106	70	130	0			
o-Xylene	20.62	2.0	μg/L	20	0	103	70	130	0			
Naphthalene	19.17	5.0	μg/L	20	0.54	93.2	70	130	0			
Surr: 1,2-Dichloroethane-d4	22.09	0	μg/L	25	0	88.4	70	130	0			
Surr: 2,5-Dibromotoluene	23.17	0	μg/L	25	0	92.7	70	130	0			
Surr: 4-Bromofluorobenzene	25.04	0	μg/L	25	0	100	70	130	0			
Surr: Dibromofluoromethane	24.71	0	μg/L	25	0	98.8	70	130	0			
Surr: Toluene-d8	23.89	0	μg/L	25	0	95.6	70	130	0			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

# EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) WATER

SAMPLE RESULTS

Date: 21-Dec-00

Project: CLIENT: Analyses Lab ID: Lab Order: Canton (MDC) 00291 0012061 0012061-01C GEI Consultants, Inc. Result Qual Units Client Sample ID: **Collection Date:** Tag Number: Matrix: 12/5/00 **AQUEOUS** W-1 DF Date Analyzed

EXTRACTABLE PETROLEUM HYDROCARBONS		MAEPH			Analyst: GG
C9-C18 Aliphatic Hydrocarbons		100	hg/L	_	12/13/00 7:37:00 PM
➤ C19-C36 Aliphatic Hydrocarbons	150	100	µg/L	_	12/13/00 7:37:00 PM
∼ C11-C22 Aromatic Hydrocarbons	140	100	µg/L	_	12/13/00 7:37:00 PM
Naphthalene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
2-Methylnaphthalene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Acenaphthylene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Acenaphthene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Fluorene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Phenanthrene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Anthracene	D	1.0	μg/L	_	12/13/00 7:37:00 PM
Fluoranthene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Pyrene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Benz(a)anthracene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Chrysene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Benzo(b)fluoranthene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Benzo(k)fluoranthene	D	1.0	µg/L	_	12/13/00 7:37:00 PM
Benzo(a)pyrene	D	1.0	µg/L		12/13/00 7:37:00 PM
Dibenz(a,h)anthracene	A N	1.0	µg/L	_	12/13/00 7:37:00 PM
Indeno(1,2,3-cd)pyrene	B	1.0	µg/L	_	12/13/00 7:37:00 PM
Benzo(g,h,i)perylene	B	1.0	µg/L	_	12/13/00 7:37:00 PM
Surr: 1-Chlorooctadecane 5	55.6	40-140	%REC	_	12/13/00 7:37:00 PM
Surr: 2-Bromonaphthalene 9	99.6	40-140	%REC		12/13/00 7:37:00 PM
Surr: 2-Fluorobiphenyl	101	40-140	%REC		12/13/00 7:37:00 PM
Surr: o-Terphenyl 7	73.5	40-140	%REC	خــ	12/13/00 7:37:00 PM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were any significant modifications made to the method as specified in section 11.3: Were all performance/acceptance standards for required QA/QC procedures achieved:

owed:

Yes \_\_\_\_ No - If No, See Case Narrative

zedures achieved:

Yes \_\_\_\_ No - If No, See Case Narrative

n section 11.3: \_\_\_\_ No \_\_\_ Yes - Details enclosed

information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the

SIGNATURE:

PRINTED NAME: Sheena Blair

\_ DATE:

12-21-00

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

mits E - Value above quantitation range
# - See Case Narrative

J - Analyte detected below quantitation limits R - RPD of B - Analyte detected in the associated Method Blank

**Date:** 21-Dec-00

Analyses Project: CLIENT: Lab ID: Lab Order: 0012061 GEI Consultants, Inc. 0012061-02C Canton (MDC) 00291 RL Qual Units Client Sample ID: Collection Date: Tag Number: Matrix: **AQUEOUS** W-5 DF 12/5/00 **Date Analyzed** 

12/13/00 8:12:00 PM		%REC		40-140	42.2	Surr: o-Terphenyl
12/13/00 8:12:00 PM		%REC		40-140	56.6	Surr: 2-Fluorobiphenyl
12/13/00 8:12:00 PM	_	%REC		40-140	55.2	Surr: 2-Bromonaphthalene
12/13/00 8:12:00 PM	-	%REC	S	40-140	33.8	Surr: 1-Chlorooctadecane
12/13/00 8:12:00 PM	-	µg/L		1.1	ND	Benzo(g,h,i)perylene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND	Indeno(1,2,3-cd)pyrene
12/13/00 8:12:00 PM	_	µg/L		11	ND	Dibenz(a,h)anthracene
12/13/00 8:12:00 PM	<del>-</del>	µg/L		1.1	ND ND	Benzo(a)pyrene
12/13/00 8:12:00 PM		µg/L		1.1	ND NO	Benzo(k)fluoranthene
12/13/00 8:12:00 PM	<u>-</u>	µg/L		1.1	ND	Benzo(b)fluoranthene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND	Chrysene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND D	Benz(a)anthracene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND D	Pyrene
12/13/00 8:12:00 PM	_	µg/L		11	ND	Fluoranthene
12/13/00 8:12:00 PM		µg/L		1.1	ND	Anthracene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND	Phenanthrene
12/13/00 8:12:00 PM		µg/L		1.1	ND	Fluorene
12/13/00 8:12:00 PM	_	µg/L		1.1	ND	Acenaphthene
12/13/00 8:12:00 PM		µg/L		1.1	ND	Acenaphthylene
12/13/00 8:12:00 PM		µg/L		1.1	ND	2-Methylnaphthalene
12/13/00 8:12:00 PM		µg/L		1.1	ND ND	Naphthalene
12/13/00 8:12:00 PM		µg/L		110	140	C11-C22 Aromatic Hydrocarbons
12/13/00 8:12:00 PM	_	µg/L		110	ND	C19-C36 Aliphatic Hydrocarbons
12/13/00 8:12:00 PM		µg/L		110	ND	C9-C18 Aliphatic Hydrocarbons
Analyst: <b>GG</b>				MAEPH	OCARBONS	EXTRACTABLE PETROLEUM HYDROCARBONS

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved: ✓ Yes

Yes

No - If No, See Case Narrative

Were any significant modifications made to the method as specified in section 11.3:

I N No - If No, See Case Narrative
Yes - Details enclosed

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

PRINTED NAME: Sheena Blair SIGNATURE:

DATE:

2-16-6

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

# - See Case Narrative E - Value above quantitation range

B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Date: 21-Dec-00

Project: CLIENT: Analyses Lab ID: Lab Order: Canton (MDC) 00291 0012061-03C GEI Consultants, Inc. Result Qual Units Client Sample ID: Collection Date: Tag Number: Matrix: **AQUEOUS** W-6  $\mathbf{DF}$ 12/5/00 Date Analyzed

EXTRACTABLE PETROLEUM HYDROCARBONS		MAEPH			Analyst: GG
C9-C18 Aliphatic Hydrocarbons	_	100	µg/L	_	12/13/00 8:48:00 PM
<sup>↑</sup> C19-C36 Aliphatic Hydrocarbons	220	100	µg/L	->	12/13/00 8:48:00 PM
<sup> </sup> C11-C22 Aromatic Hydrocarbons	470	100	µg∕L	_	12/13/00 8:48:00 PM
Naphthalene	ND	1.0	hg/L		12/13/00 8:48:00 PM
2-Methylnaphthalene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Acenaphthylene	ND	1.0	hg/L	۳.	12/13/00 8:48:00 PM
Acenaphthene	ND	1.0	µg/L		12/13/00 8:48:00 PM
Fluorene	ND	1.0	µg/L		12/13/00 8:48:00 PM
Phenanthrene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Anthracene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Fluoranthene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Pyrene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Benz(a)anthracene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Chrysene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Benzo(b)fluoranthene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Benzo(k)fluoranthene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Benzo(a)pyrene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Dibenz(a,h)anthracene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Indeno(1,2,3-cd)pyrene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Benzo(g,h,i)perylene	ND	1.0	µg/L	_	12/13/00 8:48:00 PM
Surr: 1-Chlorooctadecane	39.2	40-140	S %REC	_	12/13/00 8:48:00 PM
Surr: 2-Bromonaphthalene	94.7	40-140	%REC	_	12/13/00 8:48:00 PM
Surr: 2-Fluorobiphenyl	94.2	40-140	%REC	_	12/13/00 8:48:00 PM
Surr: o-Terphenyl	51.1	40-140	%REC	_	12/13/00 8:48:00 PM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Were any significant modifications made to the method as specified in section 11.3:

Yes \_\_ Yes ö No - If No, See Case Narrative
Yes - Details enclosed No - If No, See Case Narrative

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:

PRINTED NAME: Sheena Blair

DATE:

20-16-1

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits

> # - See Case Narrative E - Value above quantitation range

Date: 21-Dec-00

CLIENT: Lab ID: Project: Lab Order: 0012061-04C Canton (MDC) 00291 0012061 GEI Consultants, Inc. Client Sample ID: **Collection Date:** Tag Number: Matrix: 12/5/00 **AQUEOUS** W-10

Analyses

Result

RL

Qual Units

DK

Date Analyzed

EXTRACTABLE PETROLEUM HYDROCARBONS		MAEPH			Analyst: <b>GG</b>
C9-C18 Aliphatic Hydrocarbons	N	100	µg/L	_	12/13/00 9:23:00 PM
C19-C36 Aliphatic Hydrocarbons	N	100	µg/L		12/13/00 9:23:00 PM
C11-C22 Aromatic Hydrocarbons	N	100	µg/L	_	12/13/00 9:23:00 PM
	N	1.0	µg/L	_	12/13/00 9:23:00 PM
2-Methylnaphthalene	A	1.0	µg/L		12/13/00 9:23:00 PM
Acenaphthylene	N	1.0	lug/L	>	12/13/00 9:23:00 PM
Acenaphthene	ND	1.0	µg/L	_	12/13/00 9:23:00 PM
Fluorene	N	1.0	µg/L	_	12/13/00 9:23:00 PM
Phenanthrene	Ö	1.0	hg/L	>	12/13/00 9:23:00 PM
Anthracene	Ŋ	1.0	µg/L	_	12/13/00 9:23:00 PM
Fluoranthene	B	1.0	µg/L		12/13/00 9:23:00 PM
Pyrene	B	1.0	µg/Ľ	<b></b> -	12/13/00 9:23:00 PM
Benz(a)anthracene	B	1.0	µg/L		12/13/00 9:23:00 PM
Chrysene	Ö	1.0	µg/L		12/13/00 9:23:00 PM
Benzo(b)fluoranthene	B	1.0	µg/L	_	12/13/00 9:23:00 PM
Benzo(k)fluoranthene	B	1.0	µg/L	<u> </u>	12/13/00 9:23:00 PM
Benzo(a)pyrene	D	1.0	µg/L		12/13/00 9:23:00 PM
Dibenz(a,h)anthracene	D	1.0	µg/L	_	12/13/00 9:23:00 PM
Indeno(1,2,3-cd)pyrene	Ö	1.0	µg/L	_	12/13/00 9:23:00 PM
Benzo(g,h,i)perylene	B	1.0	µg/L	_	12/13/00 9:23:00 PM
Surr: 1-Chlorooctadecane 6	60.0	40-140	%REC	_	12/13/00 9:23:00 PM
Surr: 2-Bromonaphthalene	112	40-140	%REC	_	12/13/00 9:23:00 PM
Surr: 2-Fluorobiphenyl	113	40-140	%REC	_	12/13/00 9:23:00 PM
Surr: o-Terphenyl 7	70.1	40-140	%REC	_	12/13/00 9:23:00 PM

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Yes Yes I ₹ Yes - Details enclosed No - If No, See Case Narrative No - If No, See Case Narrative

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. Were any significant modifications made to the method as specified in section 11.3:

SIGNATURE:

PRINTED NAME: Sheena Blair

DATE: 12-21-00

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

ND - Not Detected at the Reporting Limit

R - RPD outside accepted recovery limits S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits

Date: 21-Dec-00

Analyses Lab ID: Project: Lab Order: CLIENT: 0012061-05C Canton (MDC) 00291 0012061 GEI Consultants, Inc. Qual Units Client Sample ID: **Collection Date:** Tag Number: Matrix: 12/5/00 **AQUEOUS** W-11

RL

DF

**Date Analyzed** 

12/13/00 9:58:00 PM	_	%REC	40-140	61.1	Surr: o-Terphenyl
12/13/00 9:58:00 PM	_	%REC	40-140	105	Surr: 2-Fluorobiphenyl
12/13/00 9:58:00 PM	_	%REC	40-140	105	Surr: 2-Bromonaphthalene
12/13/00 9:58:00 PM	_	%REC	40-140	49.1	Surr: 1-Chlorooctadecane
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Benzo(g,h,i)perylene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Indeno(1,2,3-cd)pyrene
12/13/00 9:58:00 PM	_	hg/L	1.0	ND	Dibenz(a,h)anthracene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Benzo(a)pyrene
12/13/00 9:58:00 PM		hg/L	1.0	ND	Benzo(k)fluoranthene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Benzo(b)fluoranthene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Chrysene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Benz(a)anthracene
12/13/00 9:58:00 PM		hg/L	1.0	ND	Pyrene
12/13/00 9:58:00 PM	_	μg/L	1.0	ND	Fluoranthene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Anthracene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Phenanthrene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Fluorene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Acenaphthene
12/13/00 9:58:00 PM	_	hg/L	1.0	ND	Acenaphthylene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	2-Methylnaphthalene
12/13/00 9:58:00 PM	_	µg/L	1.0	ND	Naphthalene
12/13/00 9:58:00 PM	_	µg/L	100	ND	C11-C22 Aromatic Hydrocarbons
12/13/00 9:58:00 PM	_	µg/L	100	ND	C19-C36 Aliphatic Hydrocarbons
12/13/00 9:58:00 PM	_	µg/L	100	ND	C9-C18 Aliphatic Hydrocarbons
Analyst: <b>GG</b>			MAEPH	ROCARBONS	EXTRACTABLE PETROLEUM HYDROCARBONS

Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. EPH: C11-C22 Aromatic Hydrocarbons exclude the concentration of target PAH analytes. VPH: C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range. C9-C12 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in this range and concentration of C9-C10 Aromatic Hydrocarbons.

## CERTIFICATION

Were all QA/QC procedures required by the VPH or EPH method followed:

Were all performance/acceptance standards for required QA/QC procedures achieved:

Were any significant modifications made to the method as specified in section 11.3: Yes

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. N N Yes - Details enclosed

No - If No, See Case Narrative No - If No, See Case Narrative

SIGNATURE:

PRINTED NAME: Sheena Blair

DATE: 20-15-61

POSITION: Laboratory Director (or designee)

Qualifiers: RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

B - Analyte detected in the associated Method Blank R - RPD outside accepted recovery limits

# - See Case Narrative

METHOD BLANK

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

### **QC SUMMARY REPORT**

Date: 15-Dec-00

Method Blank

Sample ID MB-3374	Batch ID: 3374	Test Code	: MAEPH	Units: µg	/L		Analysis [	Date 12/13/0	0 1:06:00 PM	Prep Date	e 12/12/00	
Client ID:		Run ID:	SV-2_001	213A			SeqNo:	95263				
	QC Sample			QC Spike Origin	nal Sample			(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
C9-C18 Aliphatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0			
C19-C36 Aliphatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0			
C11-C22 Aromatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0			
Naphthalene	ND	1.0	μg/L	0	0	0	0	0	0			
2-Methylnaphthalene	ND	1.0	μg/L	0	0	0	0	0	0			
Acenaphthylene	ND	1.0	μg/L	0	0	0	0	0	0			
Acenaphthene	· ND	1.0	μg/L	0	0	0	0	0	0			
Fluorene	ND	1.0	μg/L	0	0	0	0	0	0			
Phenanthrene	ND	1.0	μg/L	0	0	0	0	0	0			
Anthracene	ND	1.0	μg/L	0	0	0	0	0	0			
Fluoranthene	ND	1.0	µg/L	0	0	0	0	0	0			
Pyrene	ND	1.0	μg/L	0	0	0	0	0	0			
Benz(a)anthracene	ND	1.0	μg/L	0	0	0	0	0	0			
Chrysene	ND	1.0	μg/L	0	0	0	0	0	0			
Benzo(b)fluoranthene	ND	1.0	μg/L	0	0	0	0	0	0			
Benzo(k)fluoranthene	ND	1.0	μg/L	0	0	0	0	0	0			
Benzo(a)pyrene	ND	1.0	μg/L	0	0	0	0	0	0			
Dibenz(a,h)anthracene	ND	1.0	μg/L	0	0	0	0	0	0			
Indeno(1,2,3-cd)pyrene	ND	1.0	μg/L	0	0	0	0	0	0			
Benzo(g,h,i)perylene	ND	1.0	μg/L	0	0	0	0	0	0			
Surr: 1-Chlorooctadecane	15.37	1.0	μg/L	20	0	76.8	40	140	0			
Surr: 2-Bromonaphthalene	18.14	1.0	μg/L	20	0	90.7	40	140	0			
Surr: 2-Fluorobiphenyl	18.32	1.0	μg/L	20	0	91.6	40	140	0			
Surr: o-Terphenyl	13.3	1.0	μg/L	20	0	66.5	40	140	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

SAMPLE AND SAMPLE DUPLICATE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

### QC SUMMARY REPORT

Date: 15-Dec-00

Sample Duplicate

Sample ID 0012100-05ADUP E	Batch ID: <b>3374</b>	Test Code	: MAEPH	Units: μ	g/L		Analysis I	Date <b>12/14/0</b>	0 2:39:00 AM	Prep Date	e <b>12/12/00</b>	
Client ID:		Run ID:	SV-2_00	1213A			SeqNo:	95283				
	QC Sample			QC Spike Orig	inal Sample			(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
C9-C18 Aliphatic Hydrocarbons	ND	100	µg/L	0	0	0	0	0	0	0	50	
C19-C36 Aliphatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0	0	50	
C11-C22 Aromatic Hydrocarbons	ND	100	μg/L	0	0	0	0	0	0	0	50	
Naphthalene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
2-Methylnaphthalene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Acenaphthylene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Acenaphthene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Fluorene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Phenanthrene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Anthracene	ND	1.0	μg/L	0	0	0	0	. 0	0	0	50	
Fluoranthene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Pyrene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Benz(a)anthracene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Chrysene	ND	1.0	μg/L	0	0	0	. 0	0	0	0	50	
Benzo(b)fluoranthene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Benzo(k)fluoranthene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Benzo(a)pyrene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Dibenz(a,h)anthracene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Indeno(1,2,3-cd)pyrene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Benzo(g,h,i)perylene	ND	1.0	μg/L	0	0	0	0	0	0	0	50	
Surr: 1-Chlorooctadecane	14.86	1.0	μg/L	20	0	74.3	40	140	0	0	0	
Surr: 2-Bromonaphthalene	19.18	1.0	μg/L	20	0	95.9	40	140	0	0	0	
Surr: 2-Fluorobiphenyl	18.66	1.0	μg/L	20	0	93.3	40	140	0	0	0	
Surr: o-Terphenyl	15.08	1.0	μg/L	20	0	75.4	40	140	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

MATRIX SPIKE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

\_\_\_\_

**Date:** 15-Dec-00

**QC SUMMARY REPORT** 

Sample Matrix Spike

Sample ID 0012061-05CMS	Batch ID: 3374	Test Code	MAEPH	Units: μ	g/L		Analysis [	Date 12/13/0	0 10:33:00 PM	Prep Dat	e 12/12/00	
Client ID: W-11		Run ID:	SV-2_00	1213A			SeqNo:	95279				
	QC Sample			QC Spike Orig	inal Sample	!		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
n-Eicosane	12.56	1.0	μg/L	26.04	0	48.2	40	140	0			
n-Nonadecane	12.32	1.0	μg/L	26.04	0	47.3	40	140	0			
n-Nonane	15.76	1.0	μg/L	26.04	0	60.5	40	140	0			
n-Octacosane	12.22	1.0	μg/L	26.04	0	46.9	40	140	0			
n-Tetradecane	16.79	1.0	μg/L	26.04	0	64.5	40	140	0			
Naphthalene	18.04	1.0	μg/L	26.04	0	69.3	40	140	0			
Acenaphthene	18.31	1.0	μg/L	26.04	0	70.3	40	140	0			
Anthracene	18.57	1.0	μg/L	26.04	0	71.3	40	140	0			
Pyrene	16.06	1.0	μg/L	26.04	0	61.7	40	140	0			
Chrysene	15.22	1.0	μg/L	26.04	0	58.4	40	140	0			
Surr: 1-Chlorooctadecane	9.104	1.0	μg/L	20.83	0	43.7	40	140	0			
Surr: 2-Bromonaphthalene	19.9	1.0	μg/L	20.83	0	95.5	40	140	0			
Surr: 2-Fluorobiphenyl	20.14	1.0	μg/L	20.83	0	96.7	40	140	0			
Surr: o-Terphenyl	12.26	1.0	μg/L	20.83	0	58.8	40	140	0			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

LABORATORY CONTROL SAMPLE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

**Project:** 

Canton (MDC) 00291

QC SUMMARY REPORT
Laboratory Control Spike

Date: 15-Dec-00

Sample ID LCS-3374	Batch ID: <b>3374</b>	Test Code	: MAEPH	Units: μ	g/L		Analysis I	Date <b>12/13/0</b>	0 1:41:00 PM	Prep Date	e 12/12/00	
Client ID:		Run ID:	SV-2_00	1213A			SeqNo:	95264				
	QC Sample			QC Spike Orig	inal Sample	<b>)</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
n-Eicosane	21.68	1.0	μg/L	25	0	86.7	40	140	0			
n-Nonadecane	21	1.0	μg/L	25	0	84	40	140	0			
n-Nonane	16.79	1.0	μg/L	25	0	67.2	40	140	0			
n-Octacosane	23.04	1.0	μg/L	25	0	92.2	40	140	0			
n-Tetradecane	19.37	1.0	μg/L	25	0	77.5	40	140	0			
Naphthalene	19.83	1.0	μg/L	25	0	79.3	40	140	0			
Acenaphthene	19.96	1.0	μg/L	25	0	79.9	40	140	0			
Anthracene	21.32	1.0	μg/L	25	0	85.3	40	140	0			
Pyrene	19.49	1.0	μg/L	25	- 0	78	40	140	0			
Chrysene	19.04	1.0	μg/L	25	0	76.1	40	140	0			
Surr: 1-Chlorooctadecane	15.96	1.0	μg/L	20	0	79.8	40	140	0			
Surr: 2-Bromonaphthalene	20.31	1.0	μg/L	20	0	102	40	140	0			
Surr: 2-Fluorobiphenyl	20.66	1.0	μg/L	20	0	103	40	140	0			
Surr: o-Terphenyl	14.68	1.0	μg/L	20	0	73.4	40	140	0			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

PCB-WATER

**SW-846 METHOD 8082** 

SAMPLE RESULTS

Date: 21-Dec-00

CLIENT: Project: Lab Order: Canton (MDC) 00291 0012061 GEI Consultants, Inc. Client Sample ID: W-1 Collection Date: 12/5/00

* vojecti	Canton (Tipe) 00271			Companion	CHECKLOH DATES IN O OO	Č
Lab ID:	0012061-01D			Mat	Matrix: AQUEOUS	SUOE
Analyses		Result	RL (	RL Qual Units	DF	Date Analyzed
PCBS BY EPA8082	3082	SI	SW8082			Analyst: RAP
Aroclor 1016		ND	0.20	µg/L	_	12/12/00 9:52:00 PM
Aroclor 1221		N	0.20	µg/L	_	12/12/00 9:52:00 PM
Aroclor 1232		N	0.20	μg/L	_	12/12/00 9:52:00 PM
Aroclor 1242		N	0.20	µg/L	_	12/12/00 9:52:00 PM
Aroclor 1248		ND	0.20	µg/L	<u></u>	12/12/00 9:52:00 PM
Aroclor 1254		ND	0.20	μg/L		12/12/00 9:52:00 PM
Aroclor 1260		ND	0.20	µg/L	_	12/12/00 9:52:00 PM
Surr: Decachlorobiphenyl	lorobiphenyl	46.1	32-111	%REC	_	12/12/00 9:52:00 PM
Surr: Tetrachloro-m-xylene	loro-m-xylene	60.8	36-110	%REC	_	12/12/00 9:52:00 PM

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 21-Dec-00

CLIENT: GEI Consultants, Inc. Client Sample ID: W-5

Lab Order: Project:	0012061 Canton (MDC) 00291			Collection Date: 12/5/00	<b>te:</b> 12/5/0	00	
Lab ID:	0012061-02D			Matr	Matrix: AQUEOUS	SUOE	
Analyses		Result	RL Qu	RL Qual Units	DF	Date Analyzed	1
PCBS BY EPA8082	082	S	SW8082			Analyst: <b>RAP</b>	ı
Aroclor 1016		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1221		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1232		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1242		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1248		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1254		N D	0.22	µg/L	_	12/12/00 10:23:00 PM	
Aroclor 1260		ND	0.22	µg/L	_	12/12/00 10:23:00 PM	
Surr: Decachlorobiphenyl	probiphenyl	60.5	32-111	%REC	_	12/12/00 10:23:00 PM	
Surr: Tetrachloro-m-xylene	pro-m-xylene	61.8	36-110	%REC	_	12/12/00 10:23:00 PM	

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 21-Dec-00

CLIENT: Project: Lab Order: 0012061 Canton (MDC) 00291 GEI Consultants, Inc. Client Sample ID: W-6 Collection Date: 12/5/00

I sh ID:	0012061 02D			Mai	atrice ADITEC	SOLICE
Lab ID:	0012061-03D			Mai	Matrix: AQUEOUS	SOOS
Analyses		Result	RL (	RL Qual Units	DF	Date Analyzed
PCBS BY EPA8082	082	S	SW8082			Analyst: <b>RAP</b>
Aroclor 1016		ND	0.21	µg/L	_	12/12/00 10:55:00 PM
Aroclor 1221		N	0.21	µg/L	_	12/12/00 10:55:00 PM
Aroclor 1232		ND	0.21	µg/L	_	12/12/00 10:55:00 PM
Aroclor 1242		ND	0.21	µg/L		12/12/00 10:55:00 PM
Aroclor 1248		ND	0.21	µg/L	_	12/12/00 10:55:00 PM
Aroclor 1254		ND	0.21	hg/L		12/12/00 10:55:00 PM
Aroclor 1260		ND	0.21	µg/L	<u></u>	12/12/00 10:55:00 PM
Surr: Decachlorobiphenyl	orobiphenyl	40.2	32-111	%REC	_	12/12/00 10:55:00 PM
Surr: Tetrachloro-m-xylene	oro-m-xylene	49.9	36-110	%REC	_	12/12/00 10:55:00 PM

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 21-Dec-00

CLIENT: Lab Order: 0012061 GEI Consultants, Inc. Canton (MDC) 00291 Client Sample ID: W-10 Collection Date: 12/5/00

Project:	Canton (MDC) 00291			Collection Date: 12/5/00	ite: 12/5/0	č
Lab ID:	0012061-04D			Matr	Matrix: AQUEOUS	SUOE
Analyses		Result	RL Q	RL Qual Units	DF	Date Analyzed
PCBS BY EPA8082	8082	S	SW8082			Analyst: <b>RAP</b>
Aroclor 1016		N	0.20	µg/L	_	12/12/00 11:26:00 PM
Aroclor 1221		N	0.20	µg/L	_	12/12/00 11:26:00 PM
Aroclor 1232		ND	0.20	µg/L	_	12/12/00 11:26:00 PM
Aroclor 1242		N D	0.20	µg/L	_	12/12/00 11:26:00 PM
Aroclor 1248		N D	0.20	µg/L	<u> </u>	12/12/00 11:26:00 PM
Aroclor 1254		ND	0.20	µg/L	_	12/12/00 11:26:00 PM
➤ Aroclor 1260		3.7	0.20	µg/L	_	12/12/00 11:26:00 PM
Surr: Decach	Surr: Decachlorobiphenyl	64.4	32-111	%REC	_	12/12/00 11:26:00 PM
Surr: Tetrach	Surr: Tetrachloro-m-xylene	66.5	36-110	%REC	_	12/12/00 11:26:00 PM

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 21-Dec-00

Project: CLIENT: Lab ID: Lab Order: 0012061-05D Canton (MDC) 00291 0012061 GEI Consultants, Inc. Client Sample ID: W-11 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses	Result	RL Q	RL Qual Units	DF	Date Analyzed
PCBS BY EPA8082	S	SW8082			Analyst: <b>RAP</b>
Aroclor 1016	ND	0.21	µg/L	_	12/12/00 11:57:00 PM
Aroclor 1221	ND	0.21	µg/L	_	12/12/00 11:57:00 PM
Aroclor 1232	ND	0.21	µg/L	_	12/12/00 11:57:00 PM
Aroclor 1242	ND	0.21	µg/L	<b>-</b>	12/12/00 11:57:00 PM
Aroclor 1248	N	0.21	µg/L	<b>→</b>	12/12/00 11:57:00 PM
Aroclor 1254	N	0.21	µg/L	<b>→</b>	12/12/00 11:57:00 PM
Aroclor 1260	0.24	0.21	µg/L	<b>-</b>	12/12/00 11:57:00 PM
Surr: Decachlorobiphenyl	51.1	32-111	%REC	-1	12/12/00 11:57:00 PM
Surr: Tetrachloro-m-xylene	50.1	36-110	%REC		12/12/00 11:57:00 PM

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

METHOD BLANK

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

QC SUMMARY REPORT

Date: 15-Dec-00

Method Blank

Sample ID MB-3356	Batch ID: 3356	Test Code	: SW8082	Units: µg/	L		Analysis I	Date <b>12/12/0</b>	00 8:19:00 PM	Prep Date	e 12/11/00	
Client ID:		Run ID:	GC-DAL	I_001212A			SeqNo:	94662				
	QC Sample			QC Spike Origin	al Sample	!		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	ND	0.50	μg/L									
Aroclor 1221	ND	0.50	μg/L									
Aroclor 1232	ND	0.50	μg/L									
Aroclor 1242	ND	0.50	μg/L									
Aroclor 1248	ND	0.50	μg/L									
Aroclor 1254	ND	1.0	μg/L									
Aroclor 1260	ND	1.0	μg/L									
Surr: Decachlorobiphenyl	0.05082	0	μg/L	0.064	0	79.4	32	111	0			
Surr: Tetrachloro-m-xylene	0.03947	0	μg/L	0.064	0	61.7	36	110	0			

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

MATRIX SPIKE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 15-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike

Sample ID 0012097-01BMS	Batch ID: 3356	Test Cod	e: <b>SW8082</b>	Units: µ	g/L		Analysis I	Date 12/13/0	0 1:30:00 AM	Prep Date	e 12/11/00	
Client ID:		Run ID:	GC-DAL	I_001212A			SeqNo:	94672				
	QC Sample			QC Spike Orig	jinal Sample	<b>:</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	3.582	0.51	μg/L	4.082	0	87.8	40	119	0			
Aroclor 1260	3.683	1.0	μg/L	4.082	0	90.2	42	124	0			
Surr: Decachlorobiphenyl	0.04611	0	μg/L	0.06531	0	70.6	32	111	0			
Surr: Tetrachloro-m-xylene	0.04844	0	μg/L	0.06531	0	74.2	36	110	0			

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

### LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE

PCB-SOIL

**SW-846 METHOD 8082** 

SAMPLE RESULTS

Client Sample ID: Debris Date: 28-Dec-00

Lab Order: 0012061 GEI Consultants, Inc.

CLIENT:

Project: Canton (MDC) 00291

Collection Date: 12/4/00

Lab ID: 0012061-07A

Matrix: SOIL

Analyses Result RL Qual Units DΕ Date Analyzed

PCBS BY EPA8082	(0	SW8082			Analyst: <b>RAP</b>
Aroclor 1016	ND	24	µg/Kg-dry	-	12/13/00 6:10:00 AM
Aroclor 1221	ND	24	μg/Kg-dry	_	12/13/00 6:10:00 AM
Aroclor 1232	ND	24	μg/Kg-dry	_	12/13/00 6:10:00 AM
Aroclor 1242	ND	24	μg/Kg-dry	_	12/13/00 6:10:00 AM
Aroclor 1248	ND	24	μg/Kg-dry		12/13/00 6:10:00 AM
Aroclor 1254	ND	24	μg/Kg-dry		12/13/00 6:10:00 AM
Aroclor 1260	970	24	μg/Kg-dry	_	12/13/00 6:10:00 AM
Surr: Tetrachloro-m-xylene	77.1	43-117	%REC	_	12/13/00 6:10:00 AM
Surr: Decachlorobiphenyl	464	36-130	S %REC	_	12/13/00 6:10:00 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 21-Dec-00

Lab ID: PERCENT MOISTURE Project: CLIENT: Lab Order: **Analyses** Percent Moisture 0012061 0012061-07A Canton (MDC) 00291 GEI Consultants, Inc. Result 1.3 D2216 0 Qual Units Client Sample ID: Debris Collection Date: 12/4/00 wt% Matrix: SOIL DF Analyst: **SL** 12/12/00 Date Analyzed

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

METHOD BLANK

**Date:** 28-Dec-00

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**QC SUMMARY REPORT** 

Method Blank

Sample ID MB-3364	Batch ID: 3364	Test Code	: SW8082	Units: μ	g/Kg		Analysis [	Date 12/13/0	0 5:08:00 AM	Prep Date	e <b>12/11/00</b>	
Client ID:		Run ID:	GC-DAL	I_001212B			SeqNo:	94887				
	QC Sample			QC Spike Orig	inal Sample	<b>:</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	ND	80	μg/Kg									
Aroclor 1221	ND	80	μg/Kg									
Aroclor 1232	ND	80	μg/Kg									
Aroclor 1242	ND	80	μg/Kg									
Aroclor 1248	ND	80	μg/Kg									
Aroclor 1254	ND	160	μg/Kg									
Aroclor 1260	ND	160	μg/Kg									
Surr: Tetrachloro-m-xylene	5.77	0	μg/Kg	8	0	72.1	43	117	0			
Surr: Decachlorobiphenyl	6.959	0	μg/Kg	8	0	87	36	130	0			

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

Date: 28-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike

Sample ID 0012090-02BMS	Batch ID: 3364	Test C	ode: <b>SW8082</b>	Units:	μg/Kg-dry		Analysis	Date <b>12/13/</b> 0	00 7:12:00 AM	Prep Dat	e <b>12/11/00</b>	
Client ID:		Run II	C: GC-DAL	_001212B			SeqNo:	94891				
	QC Sample			QC Spike Or	riginal Sample	)			Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	461.8	95	μg/Kg-dry	591.3	0	78.1	41	125	0			
Aroclor 1260	496.3	190	μg/Kg-dry	591.3	0	83.9	39	120	0			
Surr: Tetrachloro-m-xylene	7.5	0	μg/Kg-dry	9.46	0	79.3	43	117	0			
Surr: Decachlorobiphenyl	8.504	0	μg/Kg-dry	9.46	0	89.9	36	130	0			
Sample ID 0012090-02BMSD	Batch ID: 3364	Test C	ode: <b>SW8082</b>	Units:	μg/Kg-dry		Analysis I	Date <b>12/13/0</b>	0 7:43:00 AM	Prep Date	e 12/11/00	
Client ID:		Run I	C: GC-DAL	_001212B			SeqNo:	94892				
	QC Sample			QC Spike Or	iginal Sample	!		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	468.4	94	μg/Kg-dry	588.7	0	79.6	41	125	461.8	1.42	50	
Aroclor 1260	469.3	190	μg/Kg-dry	588.7	0	79.7	39	120	496.3	5.61	50	
Surr: Tetrachloro-m-xylene	7.301	0	μg/Kg-dry	9.419	0	77.5	43	117	0	0	0	
Surr: Decachlorobiphenyl	8.017	0	μg/Kg-dry	9.419	0	85.1	36	130	0	0	0	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

NA - Not applicable where J values or ND results occur

LABORATORY CONTROL SAMPLE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 28-Dec-00

### **QC SUMMARY REPORT**

Laboratory Control Spike

Sample ID LCS-3364	Batch ID: 3364	Test Cod	le: <b>SW8082</b>	Units: μ	g/Kg		Analysis I	Date <b>12/13/0</b>	0 5:39:00 AM	Prep Date	e 12/11/00	
Client ID:		Run ID:	GC-DAL	I_001212B			SeqNo:	94888				
	QC Sample			QC Spike Orig	inal Sample	<b>!</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qua
Aroclor 1016	391	80	μg/Kg	500	0	78.2	60	118	0			
Aroclor 1260	407.9	160	μg/Kg	500	0	81.6	61	125	0			
Surr: Tetrachloro-m-xylene	6.502	0	μg/Kg	8	0	81.3	43	117	0			
Surr: Decachlorobiphenyl	6.77	0	μg/Kg	8	0	84.6	36	130	0			

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

### **TRACE METALS - WATER**

SW-846 METHODS:6010B & 7000 SERIES

**SAMPLE RESULTS** 

Date: 28-Dec-00

Lab ID: Project: CLIENT: Lab Order: 0012061 0012061-01E Canton (MDC) 00291 GEI Consultants, Inc. Client Sample ID: W-1 Collection Date: 12/5/00 Matrix: AQUEOUS

Analyses	Result	RL	RL Qual Units	DF	Date Analyzed
ICP METALS DISSOLVED SW-846		SW6010B			Analyst: <b>REB</b>
Barium	ND	200	hg/L		12/13/00 1:36:05 PM
Cadmium	ND	5.0	µg/L	<b>-</b>	12/13/00 1:36:05 PM
Chromium	N N	10	µg/L		12/13/00 1:36:05 PM
Silver	ND	7.0	J/Brl	_	12/13/00 1:36:05 PM
ARSENIC, DISSOLVED		SW7060A			Analyst: <b>APL</b>
Arsenic	ND	5.0	J/Brl		12/14/00
MERCURY, DISSOLVED	<u>z</u>	SW7470A	<u>.</u>		Analyst: MT
LEAD, DISSOLVED		SW7421			Analyst: <b>APL</b>
Lead	ND	5.0	hg/L	_	12/15/00
SELENIUM, DISSOLVED Selenium	ND	<b>SW7740</b> 5.0	<b>.</b>	<u> </u>	Analyst: <b>APL</b>

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

E - Value above quantitation range

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

# - See Case Narrative

Date: 28-Dec-00

Lab Order: CLIENT: GEI Consultants, Inc. 0012061-02E Canton (MDC) 00291 0012061 Client Sample ID: W-5 Collection Date: 12/5/00 Matrix: AQUEOUS

Project: Lab ID:

Analyses	Result	RL Qual Units	l Units	DF	Date Analyzed
ICP METALS DISSOLVED SW-846		SW6010B			Analyst: REB
Barium	ND	200	µg/L	_	12/13/00 1:39:32 PM
Cadmium	ND	5.0	hg/L	_	12/13/00 1:39:32 PM
Chromium	ND	10	µg/L	_	12/13/00 1:39:32 PM
Silver	N	7.0	µg/L	>	12/13/00 1:39:32 PM
ARSENIC, DISSOLVED		SW7060A			Analyst: <b>APL</b>
Arsenic	ND	5.0	µg/L	_	12/14/00
MERCURY, DISSOLVED	Š	SW7470A		<u>.</u>	Analyst: <b>MT</b>
merculy	2	0.20	hg/L		12/13/00
Lead	N	<b>SW/421</b> 5.0	µg/L		Analyst: <b>APL</b> 12/15/00
SELENIUM, DISSOLVED Selenium	N N	<b>SW7740</b> 5.0	hg/L	<u> </u>	Analyst: <b>APL</b> 12/14/00

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

E - Value above quantitation range

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

# - See Case Narrative

**Date:** 28-Dec-00

CLIENT: Lab Order:	GEI Consultants, Inc. 0012061			CI	Client Sample ID: W-6	W-6	
Project:	Canton (MDC) 00291			•	Collection Date: 12/5/00	12/5/00	•
Lab ID:	0012061-03E				Matrix: AQUEOUS	AQUE	OUS
Analyses		Result	RL	RL Qual Units	Units	DF	Date Analyzed
ICP METALS DI	ICP METALS DISSOLVED SW-846		SW6010B				Analyst: <b>REB</b>
Barium		N	200		µg/L		12/13/00 1:44:04 PM
Cadmium		N	5.0		µg/L	<b>-</b>	12/13/00 1:44:04 PM
Chromium		16	10		µg/L	_	12/13/00 1:44:04 PM
Silver		ND	7.0		µg/L	_	12/13/00 1:44:04 PM
ARSENIC, DISSOLVED	OLVED		SW7060A				Analyst: <b>APL</b>
Arsenic		ND	5.0		µg/L	>	12/14/00
MERCURY, DISSOLVED Mercury	SOLVED	N	<b>SW7470A</b> 0.20		µg/L	<u> </u>	Analyst: <b>MT</b> 12/13/00
LEAD, DISSOLVED	/ED	N D	<b>SW7421</b> 5.0		h9/L	<u> </u>	Analyst: <b>APL</b> 12/19/00
SELENIUM, DISSOLVED Selenium	SOLVED	N D	<b>SW7740</b> 5.0		h8/L	->	Analyst: <b>APL</b> 12/14/00

Qualifiers:	
ND - Not Detected at the Reporting Limit	

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

<sup>\* -</sup> Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

<sup># -</sup> See Case Narrative

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

Date: 28-Dec-00

Project: Lab ID: Lab Order: CLIENT: Analyses 0012061-04E Canton (MDC) 00291 0012061 GEI Consultants, Inc. Result RL Oual Units Client Sample ID: W-10 Collection Date: 12/5/00 Matrix: AQUEOUS J T

Allatyses	Nesuit	KL Qui	KL Qual Units	DF	Date Analyzed
ICP METALS DISSOLVED SW-846		SW6010B			Analyst: <b>REB</b>
Barium	ND	200	µg/L	_	12/13/00 1:48:36 PM
Cadmium	ND	5.0	µg/L	<u>~</u>	12/13/00 1:48:36 PM
Chromium	10	10	µg/L		12/13/00 1:48:36 PM
Silver	ND	7.0	µg/L	<u>-</u> `	12/13/00 1:48:36 PM
ARSENIC, DISSOLVED Arsenic	N D	<b>SW7060A</b> 5.0	µg/L	<u> </u>	Analyst: <b>APL</b> 12/14/00
MERCURY, DISSOLVED Mercury	N D	<b>SW7470A</b> 0.20	J/brl	<u> </u>	Analyst: <b>MT</b> 12/13/00
LEAD, DISSOLVED Lead	N D	<b>SW7421</b> 5.0	µg/L	<u> </u>	Analyst: <b>APL</b> 12/15/00
SELENIUM, DISSOLVED Selenium	ND	<b>SW7740</b> 5.0	hg/L	<b>\</b>	Analyst: <b>APL</b> 12/14/00

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ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

Date: 28-Dec-00

Project: Lab ID: Analyses Lab Order: CLIENT: 0012061-05E 0012061 Canton (MDC) 00291 GEI Consultants, Inc. Result RL Qual Units Client Sample ID: W-11 Collection Date: 12/5/00 Matrix: **AQUEOUS** 

Analyses	Result	RL	RL Qual Units	DF	Date Analyzed
ICP METALS DISSOLVED SW-846		SW6010B			Analyst: REB
Barium	ND	200	J/gu	_	12/13/00 1:52:07 PM
Cadmium	ND	5.0	µg/L		12/13/00 1:52:07 PM
Chromium	13	10	µg/L	<b>→</b>	12/13/00 1:52:07 PM
Silver	ND	7.0	hg/L	_	12/13/00 1:52:07 PM
ARSENIC, DISSOLVED		SW7060A			Analyst: <b>APL</b>
Arsenic	ND	5.0	J/gu	<u></u>	12/14/00
MERCURY, DISSOLVED Mercury	ND	<b>SW7470A</b> 0.20	µg/L	<b></b>	Analyst: <b>MT</b> 12/13/00
LEAD, DISSOLVED Lead	N	<b>SW7421</b> 5.0	h9/L	_	Analyst: <b>APL</b> 12/15/00
SELENIUM, DISSOLVED Selenium	N	<b>SW7740</b> 5.0	µg/L	_	Analyst: <b>APL</b> 12/14/00

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

\* - Value exceeds Maximum Contaminant Level

R - RPD outside accepted recovery limits

S - Spike Recovery outside accepted recovery limits

E - Value above quantitation range

# - See Case Narrative

METHOD BLANK

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

Date: 19-Dec-00

### **QC SUMMARY REPORT**

Method Blank Sample ID: MB-3359 Batch ID: 3359 Test Code: SW6010B Units: µg/L Analysis Date 12/13/00 12:51:28 PM Prep Date: 12/12/00 Client ID: Run ID: ICP-OPTIMA\_001213A SeqNo: 94772 QC Sample QC Spike Original Sample Original Sample Result RL Analyte Units Amount Result %REC LowLimit HighLimit or MS Result %RPD **RPDLimit** Qu Barium ND 200 μg/L Cadmium ND 5.0 μg/L Chromium ND 10 μg/L Silver ND 7.0 μg/L Sample ID: MB-3359 Batch ID: 3359 Test Code: SW7060A Analysis Date 12/14/00 Units: µg/L Prep Date: 12/12/00 Client ID: GFAA-4100 001214A Run ID: SegNo: 95692 QC Sample QC Spike Original Sample Original Sample Analyte Result RL Units Amount Result %REC LowLimit HighLimit or MS Result **RPDLimit** %RPD Qu Arsenic ND 5.0 μg/L Sample ID: MB-3372 Batch ID: 3372 Test Code: SW7470A Units: µg/L Analysis Date 12/13/00 Prep Date: 12/13/00 HG-FIMS\_001213C Client ID: Run ID: SeqNo: 94931 QC Sample QC Spike Original Sample Original Sample Result RL Analyte Units Amount Result %REC LowLimit HighLimit or MS Result %RPD **RPDLimit** Qu ND 0.20 Mercury µg/L Sample ID: MB-3359 Batch ID: 3359 Test Code: SW7421 Units: µa/L Analysis Date 12/15/00 Prep Date: 12/12/00 Client ID: Run ID: GFAA-4100\_001214A SeqNo: 95746 QC Sample QC Spike Original Sample Original Sample Analyte Result RL Units Amount Result %REC LowLimit HighLimit or MS Result %RPD **RPDLimit** Qu Lead ND 5.0 µg/L Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

**Date:** 19-Dec-00

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**QC SUMMARY REPORT** 

Method Blank

Sample ID: MB-3359	Batch ID: 3359	Test Code:	SW7740 Units: µg/L			Analysis Date 12/14/00			Prep Date: 12/12/00			
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95693				
	QC Sample			QC Spike Ori	ginal Sample	!		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qı
Selenium	ND	5.0	μg/L									

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 19-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike Duplicate

Sample ID: 0012082-01BMSD	Batch ID: 3359	Test Code:	SW7060	A Units: μg	/L	-	Analysis [	Date 12/14/0	0	Prep Date	e: <b>12/12/00</b>	
Client ID:		Run ID:	GFAA-4	100_001214A			SeqNo:	95648				
	QC Sample			QC Spike Origi	nal Sample	;		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Arsenic	55.88	5.0	μg/L	50	0	112	75	125	58.47	4.53	20	
Sample ID: 0012066-01CMS	Batch ID: <b>3372</b>	Test Code:	SW7470	A Units: μg	/L		Analysis [	Date 12/13/0	0	Prep Date	e: <b>12/13/00</b>	
Client ID:		Run ID:	HG-FIMS	_001213C			SeqNo:	94918				
	QC Sample			QC Spike Origin	nai Sample	<b>:</b>		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Mercury	2.575	0.20	μg/L	4	0	64.4	75	125	0			s
Sample ID: 0012066-01CMSD	Batch ID: 3372	Test Code:	SW7470	A Units: μg	/L	20	Analysis D	Date 12/13/0	0	Prep Date	e: 12/13/00	
Sample ID: 0012066-01CMSD Client ID:	Batch ID: 3372	Test Code: Run ID:		A Units: μg. 5_001213C	/L	90	Analysis E SeqNo:	Pate 12/13/0 94919	0	Prep Date	e: 12/13/00	
·	Batch ID: 3372  QC Sample						•	94919	<b>0</b> Original Sample	Prep Date	e: 12/13/00	
·				_001213C	nal Sample	%REC	•	94919		Prep Date	e: <b>12/13/00</b> RPDLimit	Qu
Client ID:	QC Sample	Run ID:	HG-FIMS	_001213C QC Spike Origin	nal Sample		SeqNo:	94919	Original Sample	·		Qu S
Client ID: Analyte	QC Sample Result	Run ID:	HG-FIMS Units μg/L	QC Spike Origin	nal Sample Result 0	%REC	SeqNo: LowLimit	94919 ( HighLimit	Original Sample or MS Result 2.575	%RPD 1.47	RPDLimit	
Client ID:  Analyte  Mercury	QC Sample Result 2.613	Run ID: RL 0.20	Units  µg/L  SW7421	QC Spike Origin Amount	nal Sample Result 0	%REC	SeqNo: LowLimit	94919 ( HighLimit 125	Original Sample or MS Result 2.575	%RPD 1.47	RPDLimit	
Client ID:  Analyte  Mercury  Sample ID: 0012082-01BMS	QC Sample Result 2.613	Run ID:  RL  0.20  Test Code:	Units  µg/L  SW7421	QC Spike Origin Amount 4 Units: µg/	nal Sample Result 0	%REC 65.3	SeqNo:  LowLimit  75  Analysis E	94919 HighLimit 125 Pate 12/15/0 95705	Original Sample or MS Result 2.575	%RPD 1.47	RPDLimit	
Client ID:  Analyte  Mercury  Sample ID: 0012082-01BMS	QC Sample Result 2.613  Batch ID: 3359	Run ID:  RL  0.20  Test Code:	Units  µg/L  SW7421	QC Spike Origin Amount 4 Units: µg/	nal Sample Result 0 /L	%REC 65.3	SeqNo:  LowLimit  75  Analysis E	94919 HighLimit 125 Pate 12/15/0 95705	Original Sample or MS Result 2.575	%RPD 1.47	RPDLimit	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

RL - Reporting Limit; defined as the lowest concentration the laboratory can accurately quantitate.

MATRIX SPIKE & MATRIX SPIKE DUPLICATE

**CLIENT:** 

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 19-Dec-00

### **QC SUMMARY REPORT**

Sample Matrix Spike Duplicate

				-				-		·		
Sample ID: <b>0012082-01BMSD</b>	Batch ID: <b>3359</b>	Test Code:	SW7421	Units: µg/I	-		Analysis [	Date 12/15/0	00	Prep Date	e: <b>12/12/00</b>	
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95706				
	QC Sample			QC Spike Origin	al Sample	<del>)</del>			Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Lead	42.86	5.0	μg/L	50	0	85.7	75	125	42	2.04	20	
Sample ID: 0012082-01BMS	Batch ID: <b>3359</b>	Test Code:	SW7740	Units: µg/l	-		Analysis [	Date 12/14/0	00	Prep Date	e: <b>12/12/00</b>	
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95647				
	QC Sample	QC Sample QC Spike Original Sample Original							Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Selenium	32.12	5.0	μg/L	40	0	80.3	75	125	0			
Sample ID: 0012082-01BMSD	Batch ID: 3359	Test Code:	SW7740	Units: µg/l	-		Analysis E	Date 12/14/0	0	Prep Date	: 12/12/00	
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95649				
	QC Sample			QC Spike Origina	al Sample				Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Selenium	32.31	5.0	μg/L	40	0	80.8	75	125	32.12	0.561	20	

Qualifiers:

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits

LABORATORY CONTROL SAMPLE

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 19-Dec-00

### **QC SUMMARY REPORT**

Laboratory Control Spike

Sample ID: LCS	3-3359 Batch ID: 3359	Test Code	: SW6010	B Units: μg/	L		Analysis I	Date 12/13/	00 12:54:59 PM	Prep Dat	e: <b>12/12/00</b>	
Client ID:		Run ID:	ICP-OPT	IMA_001213A			SeqNo:	94773		·		•
	QC Sample			QC Spike Origin	ai Sample	<del>)</del>			Original Sample			
Analyte	Result	RL	Units	Amount		%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Q
Barium	4031	200	μg/L	4000	0	101	80	120	0			
Cadmium	794.2	5.0	μg/L	800	0	99.3	80	120	0			
Chromium	4005	10	μg/L	4000	0	100	80	120	0			
Silver	390.6	7.0	µg/L	400	0	97.6	80	120	0			
Sample ID: LCS	-3359 Batch ID: 3359	Test Code	: SW7060	A Units: μg/l			Analysis [	Date 12/14/0	00	Prep Date	e: <b>12/12/00</b>	
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95688		-1		
	QC Sample			QC Spike Origin	al Sample	<b>!</b>			Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit		or MS Result	%RPD	RPDLimit	Qu
Arsenic	52.79	5.0	μg/L	50	0	106	80	120	0			
Sample ID: LCS-	-3372 Batch ID: 3372	Test Code	: SW7470	A Units: μg/l			Analysis [	Date 12/13/0	10	Prep Date	e: <b>12/13/00</b>	
Client ID:		Run ID:	HG-FIMS	_001213C			SeqNo:	94930				
	QC Sample			QC Spike Origin	al Sample			1	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Mercury	3.917	0.20	μg/L	4	0	97.9	80	120	0			
Sample ID: LCS-	-3359 Batch ID: 3359	Test Code	: SW7421	Units: µg/L			Analysis D	ate 12/15/0	0	Prep Date	e: 12/12/00	
Client ID:		Run ID:	GFAA-41	00_001214A			SeqNo:	95744				
	QC Sample			QC Spike Origina	al Sample			(	Original Sample			
Analyte	Result	RL	Units	Amount	Result		LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Lead	52.63	5.0	μg/L	50	0	105	80	120	0			
Qualifiers: NI	D - Not Detected at the Reporting Limit	S-	Spike Reco	very outside accepte	ed recovery	limits	B - Analy	te detected in	the associated Meth	nod Blank		
J -	Analyte detected below quantitation limits	R -	RPD outsid	e accepted recovery	limits		·					

CLIENT:

GEI Consultants, Inc.

Work Order:

0012061

Project:

Canton (MDC) 00291

**Date:** 19-Dec-00

### QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-3359	Batch ID: 3359	Test Cod	e: <b>SW</b> 7740	Units: μ	Units: µg/L			Date 12/14/0	Prep Date	e: <b>12/12/00</b>		
Client ID:		Run ID:	GFAA-4	100_001214A			SeqNo:	95689				
	QC Sample			QC Spike Ori	ginal Sample	)		(	Original Sample			
Analyte	Result	RL	Units	Amount	Result	%REC	LowLimit	HighLimit	or MS Result	%RPD	RPDLimit	Qu
Selenium	39.38	5.0	μg/L	40	0	98.5	80	120	0			

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits